

ASSESSMENT OF DISSIMULATION IN A FORENSIC POPULATION

By

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Abstract of Dissertation Presented to the Graduate School
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The incidence of exaggerating and minimizing of psychopathology in a forensic setting was investigated. Primary therapists, psychologists and psychiatrists evaluated 144 consecutive admissions at the North Florida Evaluation and Treatment Center (NFETC) using two scales designed to assess the residents' portrayal of psychopathology and motivation for the portrayal of their behavior. Inter-rater agreement was established to differentiate those seen as exaggerating, minimizing and accurately reflecting their pathology.

Baserate analysis suggested that the rate of malingering in this forensic facility is lower than would have been predicted from the literature. Defensive responding was more common than malingering, but most of the residents were seen as accurately portraying their

pathology. Severity of crime was not related to dissimulation. Only 10% of the sample was seen as exaggerating pathology, and 28.6% of the sample was seen as minimizing pathology. Most of the population was seen as accurately reflecting their pathology. Those seen as exaggerating their pathology were also considered to be malingering. All of the malingerers were in the Incompetent to Proceed (ITP) category, although this was not statistically significant.

Minnesota Multiphasic Personality Inventory (MMPI) analysis revealed several statistically and clinically significant differences when comparing the accurate, exaggerating and minimizing groups. MMPI differences were found comparing the ITP and Not Guilty by reason of Insanity (NGI) group. The bulk of the differences were between the exaggerators and the rest of the sample. Significant differences were found on MMPI scales indicative of general pathology and scales to assess dissimulation. Prediction equations did not, however, aid in the prediction of malingering.

Malingering in this forensic sample appears to be manifested by a global endorsement of psychopathology indicative of a variety of psychiatric disorders. The general over-reporting of psychopathology might be the best indicator of malingering. Suggestions for future research in the area of malingering is discussed.

CHAPTER 1 INTRODUCTION

The revised third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-3-R) defines malingering to be the intentional production or exaggeration of physical or psychological symptoms motivated by an external situation (e.g., incentives) and not the result of a mental disorder (APA, 1987). As such, malingering is a conscious attempt at portraying oneself in a fraudulent manner in order to gain an external advantage. Malingering is not seen as a mental disorder although several psychoanalytic theorists have considered malingering to be a sign representative of a mental disease more severe than the neurotic disorders (Eissler, 1951). This formulation is based on clinical observations which suggest that those who malingering tend to develop mental difficulties subsequent to the malingering.

Pollack (1982) suggests that there are four dimensions to the construct of malingering. The first dimension is the ability to identify a true illness with which to contrast the malingerer. This is somewhat difficult in the mental health profession given the debate concerning the veracity of the existence of mental health disorders (Szasz, 1987) and in the utility of classification (Rogers,

1954). There is a sizable literature on this debate. Current practice in the mental health fields recognizes the necessity of diagnosis and the third edition of the DSM has helped to alleviate many of the concerns regarding classification (Blashfield, 1984). The second dimension concerns the suspected malingerer's desire to assume a sufficiently instrumental sick role. This refers to society's reactions to the attempted dissimulation in terms of benefits that it might accrue for someone who legitimately suffers from such a disorder. The third dimension concerns the purposefulness of the dissimulation. Accordingly, the portrayal must be under control of the suspected malingerer. Psychologically, the act must be a conscious portrayal. The fourth dimension concerns the rationality of the act. In other words, the benefits accrued to the malingerer should be considered desirable by persons not mentally impaired. In general, Pollack suggests that mental health professionals are less likely to suspect and identify malingering because they tend to recognize many variables that might be construed as related to the above dimensions (e.g., need for love) that other professionals would not. As such, the legal model of malingering is more inclusive than the model employed by mental health professionals and stresses the purposive intent to deceive. Concomitantly, attorneys tend to be the

professionals who most often will raise the specter of malingering.

Resnick (1988) delineates five reasons why people might desire to malingering psychosis. These reasons can be extended to the construct of malingering in general. Criminals may seek to avoid punishment in some form. This is often accomplished by attempting to appear Incompetent to Stand Trial (IST, also known as Incompetent to Proceed (ITP)) or Not Guilty by Reason of Insanity (NGI). Persons may seek to avoid military service. Persons may seek to gain financial benefit through agencies (e.g., social security). Prisoners may malingering to obtain better quarters or drugs. Persons may also malingering in order to gain admittance into the hospital and get free room and board. This study is concerned with the first group mentioned above which involves a forensic population.

The diagnosis of a mental disorder does not preclude the presence of malingering. For example, a person diagnosed with schizophrenia might malingering by reporting the experience of hallucinations in order to receive financial benefits in the absence of the symptoms. The DSM-3-R does not provide information concerning the prevalence of malingering in the general population or in special populations. Melton (1987) and Grisso (1986) both suggest that forensic populations are likely to be over-represented by malingeringers due to the potential

benefits of a successful portrayal of insanity or diminished capacity. Rogers (1986a) found that approximately 21% of persons being assessed for criminal insanity were suspected of malingering. There is little corroborating demographic data concerning this population. Nevertheless, this data would support the above notion concerning the over-representation of forensic populations in relation to malingering.

The construct of defensiveness is not included in the DSM-3-R. Defensiveness is the polar opposite of malingering and is the conscious denial or minimization of physical or psychological symptoms (Rogers, 1988). As with malingering, this minimization must be seen as rational and portrayed in order to gain an external advantage. Much of the above discussion related to the motivation to malingering applies to defensiveness. In forensic settings, defensiveness is most likely to be seen in persons who have already been convicted or found NGI and are looking to be released or gain privileges (Grisso, 1986). It is important to distinguish between someone who is protecting their ego resources through defense mechanisms and one who is defensive in terms of the malingering-defensiveness continuum. Defensiveness, as used in this context, is not a psychological defense mechanism, rather it is an instrumental behavior designed to gain external benefits.

Population

The constructs of malingering and defensiveness are of significant importance in forensic settings which provide strong external incentives for behavioral dissimulation. Forensic psychiatric facilities (herein referred to as forensic facilities) vary from state to state in terms of criteria for admittance and relationship with the state's corrections department. In the state of Florida the forensic facilities are under the auspices of the Department of Health and Rehabilitative Services (HRS). There are three such facilities in Florida. This study will involve the North Florida Evaluation and Treatment Center (NFETC) located in Gainesville, Florida. There are three general psychiatric units at the NFETC which are almost entirely comprised of persons who have been adjudicated either NGI or IST.

The majority of persons at the NFETC are those who have been found to be Incompetent to Stand Trial. These persons have yet to stand trial. As such, Grisso (1986) posits several reasons why this population might be motivated to malingering a mental disorder. Overtly crazy behavior during incarceration prior to trial might help in establishing an insanity defense. The delay while the defendant is being considered incompetent allows the defense council greater time to prepare the defense. This delay may also result in greater difficulty for the

prosecutor obtaining witnesses willing to testify.

Finally, the prosecution might be willing to plea bargain rather than have to interact with the protracted process of establishing someone's competency.

The national precedent for the current use of the incompetency criteria was set in the case of Dusky vs. United States (1960). This case stressed the current status of the defendant and his ability to have a rational and factual understanding of proceedings for which he is undergoing, as well as his ability to assist in these proceedings. Competency issues relate to the defendant's current presentation and has no relation to his mental status at the time of the offense.

Prior to 1989, the Florida rules of criminal procedure in 1987 listed the following criteria for the finding of IST. The defendant should be able to demonstrate the following: an appreciation of the charges, an understanding of the range and nature of possible penalties associated with these charges, an understanding of the adversarial nature of the legal process, the capacity to disclose to his attorney pertinent facts surrounding the alleged offense, the ability to relate to his attorney, the ability to assist his attorney in planning a defense, the capacity to realistically challenge prosecution testimony, the capacity to testify relevantly, the motivation to help oneself in the legal process and the capacity to cope with

the stress of incarceration while awaiting trial. In 1989, the Florida rules of criminal procedure concerning competency were abbreviated to six criteria. The current criteria are as follows: the defendant demonstrates an appreciation of the charges and range and nature of concomitant penalties, has an understanding of the nature of the legal process, has the capacity to disclose to his attorney facts pertinent to the proceedings at issue, and has the ability to manifest appropriate courtroom behavior and has the capacity to testify relevantly.

The competency criteria do not directly relate to mental illness. As such, one may be IST and not be diagnosed with a mental disorder. Equivalently one may have a major psychiatric disorder and not be considered to be incompetent to stand trial. Grisso (1988) reported that between 10% and 25% of those who are found to be legally competent have major psychotic disorders diagnosed. Lawrence (1985) cautions that mental health professionals often report on the defendant in terms of psychiatric diagnosis and psychological constructs in lieu of the legally oriented competency questions. My personal experience suggests that this is less of an issue at the present time.

Grisso (1988) suggests that there are four major reasons why defendants appear to have the functional deficits required to be considered IST. They are mental

disorder, mental retardation, ignorance and malingering. Grisso suggests that only deficits associated with a mental disorder will be sufficient for the legal determination of IST. The final determination of competency is a legal one and is not under the purview of mental health professionals. As such, mental health professionals should provide a descriptive service from which a judge might base his legal decision. Scheidemandel and Kanno (1969) conducted a survey of forensic facilities and found that persons classified as IST outnumbered the NGI population by a ratio of approximately 13:1. Lawrence (1985) cited numerous studies supporting the preponderance of IST persons in forensic settings.

Despite the dominance of IST persons in forensic settings, the NGI population receives significantly more attention in the popular media. The attempted assassination of Ronald Reagan focused national attention on the insanity defense (Melton, 1987). As with the competency criteria, the criteria required in order to be considered legally insane at the time of the offense vary from state to state. Quen (1974) traced the history of the insanity defense to biblical days. The current standards that most states in the United States adhere to are based on English Common Law. Specifically, the M'Naughten decision in 1843 provides the guidelines most commonly applied in the United States (including the state of

Florida). There are two facets to the M'Naughten rule. The first is that the defendant suffer from a mental disease or defect. The second is that the defendant had a defect in reason which resulted in the defendant not understanding either the nature and quality of the act or that the act was wrong.

Florida's rules of criminal procedure (1987) state that when an NGI plea is contested the court must order the defendant to be evaluated by two or three examiners. The examiners must submit a report to the court including techniques employed during the evaluation, a description of the defendant's mental status at the time of the offense and the supporting facts or opinions. The ultimate decision regarding sanity is an issue of fact resolved by the judge or jury. Unlike the competency decision, insanity does not relate to the defendant's current condition and requires that the examiner reconstruct the defendant's condition at the time of the offense.

Melton (1987) points out that the diagnosis of a mental disorder or impairment is necessary for the finding of NGI; however, this is not sufficient. The mental disorder must in some way be causally linked to the act. Further, most NGI defendants have committed serious crimes (often murder) which strongly argues the instrumental value of having been found NGI for those in forensic populations. However, 60%-90% of those found NGI are still diagnosed as

psychotic after acquittal. Recidivism of NGI defendants are roughly the same as matched felons. Howard and Clark (1985) suggest that the irrationality of the crime might be the biggest contributor to the success of the NGI defense. They further stated that approximately 8% of a Michigan sample evaluated for the NGI defense actually received it. Melton (1987) suggested that approximately 25% of those evaluated are successful. However, Melton points out that the NGI defense is only considered in less than .5% of the criminal proceedings.

The NGI and IST populations are inter-related in several aspects. Howard and Clark (1985) point out that a period of internment as incompetent contributes positively to a later finding of insanity. As mentioned above, this provides motivation for incompetent defendants to malingering during the trial. Grisso (1986) relates the constructs of legal insanity and legal incompetence in terms of competency. The insanity criteria can be looked at in terms of competency at the time of the offense.

The Problem and Related Research

The identification of malingering and defensiveness in general and in forensic populations in specific have not been popular topics in the psychological literature (Rogers, 1988). A clinical psychologist's resources for the identification of the above constructs are largely

interview information, psychological testing, and psychophysiological methods. Rogers (1988) suggests that psychophysiological methods are not practical to a clinician outside of a laboratory setting or for select cases for which significant amounts of money are available.

Resnick (1988) offers information which would help to identify persons attempting to malingering psychosis during a clinical interview. Brandt (1988) offers similar information for those attempting to malingering amnesia. Unfortunately, these are not standardized measures and they rely heavily on a skilled interviewer with ample time to spend in a one on one situation. Rogers (1986) pointed out the haphazard manner in which clinical interviews are used in identifying persons suspected of malingering or being defensive. In response, he developed the Structured Interview of Reported Symptoms (SIRS). The SIRS is a structured interview designed to identify malingerers based on strategies observed by experts. The initial validity and reliability data appear promising (Rogers, 1988). Unfortunately, further psychometric data are needed before it can become an accepted tool in clinical practice. A major disadvantage of this type of instrument involves the widespread use of such an interview as a screening instrument. Manpower in large facilities is likely to be insufficient and given the SIRS limited purpose it does not provide breadth of information which would justify standard

implementation. It is probably best employed when malingering is suspected.

Psychological testing provides a potentially fruitful area for investigation concerning malingering and defensiveness. Major areas of psychological testing include objective and projective personality tests, neuropsychological tests and intelligence tests. Intelligence tests have limited usefulness in relation to dissimulation in a forensic population who will likely be more invested in attempting to appear psychotic. As such, there are few studies involving forensic populations and intellectual measures. Schretlen (1986) reviewed 11 studies involving malingering and intellectual tests. None of the studies involved forensic populations. Schretlen reported that response scatter was the most effective detection strategy based on the rationale that fakers are likely to fail items that non-fakers pass and fakers pass items that non-fakers fail. This strategy is likely to have limited effectiveness as most current intellectual measures are obviously hierarchical. In addition to the above reasons, intelligence tests are not likely to be efficient as a screening measure in order to determine if one is malingering or being defensive because they tend to be time consuming and require individual administration by a skilled examiner.

Neuropsychological tests are gaining acceptance in court for civil suits regarding injury claims. However, similar to intellectual tests they have a limited role in relation to incarcerated forensic populations consisting of persons found to be NGI and IST. Pankratz (1988) discusses the role of neuropsychological measures in the identification of malingering. He suggests using symptom validity testing which requires a forced choice of the testee. There is a percentage correct that one should get simply from chance, and if the testee does significantly worse than this dissimulation should strongly be suspected. This is effective for somatic complaints (e.g., vision problems) and memory problems. Lezak (1983) describes a technique in which the testee is asked to memorize 15 different items. The number of items is stressed. In actuality the testee needs to remember three or four ideas to recall most of the items. If few items are recalled, malingering is suspected. Schretlen (1986) reviewed five studies involving the Bender-Gestalt test and suggested when figures are intentionally distorted they might be identified; however, further studies are needed before detection strategies are implemented. In general, neuropsychological tests appear to hold promise for the identification of malingering in relation to specific disorders and complaints; however, they do not appear to be useful as a global screening instrument.

Both intellectual and neuropsychological tests have limited usefulness in the detection of defensiveness. They require skilled administration and have little connection with the types of dissimulation seen in an incarcerated forensic facility.

Projective personality techniques include the Rorschach and the Thematic Apperception Test (TAT). Projective techniques are grounded in psychodynamic theory which states that one's inner perception shapes one's outer world (Rabin, 1986). Projective techniques tap into this process by presenting the testee with an ambiguous stimuli or task which presents an unlimited number of responses. The manner in which the response is made is considered to be a reflection of the testee's inner world (Anastasi, 1988). Inferences are made into the unconscious functioning of the testee. These unconscious aspects are often not considered by those who adhere to objective tests (McClelland, 1981). As such, proponents of projective techniques point to the relatively richer pool of data which they receive from their techniques. In relation to forensic evaluations, projective techniques are difficult to use in a legal situation due to their theoretical grounding. Ziskin (1981) points to the difficulty in using projective techniques in the courtroom.

There has been little research in the areas of malingering and defensiveness in relation to performance on

projective techniques. Stermac (1988) attributes this paucity of information to the erroneous belief that these methods are immune to dissimulation as a result of the ambiguous nature of the projective task. The Rorshach is the most widely used projective personality technique (Anastasi, 1988). However, Carp and Shavzin (1950) demonstrated that the Rorshach is not immune to dissimulation. Both Schretlen (1986) and Stermac (1988) have reviewed the related studies and have found this to be a robust finding. Schretlen (1986) further points out that while the Rorshach can be susceptible to malingering and defensiveness, there does not appear to be a stable and identifying pattern allowing for detection. Albert, Fox and Kahn (1980) had experts from the Society for Personality Assessment rate Rorshach protocols of six psychiatric patients with a psychotic diagnosis and 18 undergraduate students. Six of the undergraduates were informed of the nature of paranoid schizophrenia via an audio tape. They and six other students were instructed to take the Rorshach as if they were suffering from paranoid schizophrenia. Results showed that the informed fakers were diagnosed paranoid schizophrenic 72% of the time; while the psychiatric patients were diagnosed as such 48% of the time and the uninformed students were diagnosed as paranoid schizophrenic 46% of the time. These results

clearly suggest that the Rorshach is susceptible to dissimulation and that this is difficult to identify.

Exner (1986) reported that when using his comprehensive scoring system malingering is identifiable. In particular, malingerers tended to give more good form responses with bizarre wording. Seamons et al. (1981) suggested that malingerers tended to be more dramatic in the content of their responses. Unfortunately, these studies are sparse and are based on simulation designs. Additionally, specific cut-off scores for the identification of malingering have not been established (Stermac, 1988). Schretlen (1986) suggests that malingering should be suspected in the following situations: reduced number of responses, slow reaction times, frequent inanimate and animal movement responses, vague or poor form responses, dramatic responses, an attitude of pained compliance, frequent card rejections, inconsistency, and failure to understand the task.

Exner (1986) reports several characteristics of a Rorshach protocol that will help to identify a defensive responder. These include a high frequency of popular responses and frequent responses based on form; however, Exner and Sherman (1977) demonstrated that the Rorshach is difficult to reply to in a defensive manner when the testee has been diagnosed as a schizophrenic.

Stermac (1988) reported that there were few studies concerning dissimulation with other projective techniques. In general, projective techniques hold promise for the identification of malingering and defensiveness; however, controlled studies on the topic are not currently available to validate the current finding. Projective techniques require a skilled assessor and are not likely to be economical as screening instruments in large forensic facilities.

Greene (1988) reported that significantly more studies concerning the topic of dissimulation are available concerning objective personality tests than any other type of psychological test. This is largely due to the Minnesota Multiphasic Personality Inventory (MMPI), which is the most widely researched and used personality measurement available to psychologists (Anastasi, 1988). Objective personality tests, in general, and the MMPI, in particular, offer several advantages as a screening measure for the identification of malingering and defensiveness in large forensic settings. The MMPI is easy to administer and does not require professional training. Although it takes the testee approximately one to two hours to complete the MMPI, little supervision is needed and, therefore, several persons may take it simultaneously at a minimal expense in man-power terms. As a result the MMPI is easy to administer in prison settings. The MMPI provides

information that is useful in addition to screening for malingering and defensiveness. Scoring is objective and computer scoring packages are readily available. Further, the MMPI has scales that are designed to uncover attempts at dissimulation. The MMPI appears to be the best available screening measure for psychologists to administer in forensic settings.

The MMPI was developed by Hathaway and McKinley in 1941 at the University of Minnesota (Dahlstrom, Welsh, & Dahlstrom, 1972). The inventory consists of 566 items which require the testee to respond either true or false. The items used in the test were selected from an original pool of more than 1000 items. The selection of these items was based on empirical trials with criterion groups of patients who were contrasted with normals.

There are currently ten clinical scales and three validity scales which make up the standard MMPI profile. Greene (1980) and Graham (1988) both point to the plethora of specialized scales that have since been developed. The validity scales were designed to detect the test taking attitude of the testee and are related to the constructs of malingering and defensiveness. The ten clinical scales are related to psychopathology and consist of the following: hypochondriasis, depression, hysteria, psychopathic deviate, masculinity-femininity, paranoia, psychasthenia, schizophrenia, hypomania and social introversion. There is

currently a debate concerning the use of empirically derived scales. Briefly stated, empirical tests do not offer a rationale for inclusion of items and, therefore, those items that are selected might be a result of random noise or variables related to the specific population assessed (Jackson, 1971). This is one of the major criticisms concerning the MMPI since the normative groups were white residents of the state of Minnesota. For the purposes of this study, the empirical debate suggests that a priori hypothesis regarding the empirically derived scales should be made conservatively and related only to the constructs that the empirical scale directly measures. As such, the empirically derived validity scales are related to malingering and defensiveness; however, the clinical scales are not and therefore, will not be included in terms of a priori hypothesis in identifying dissimulation. Many of the special scales since developed were done so on rational grounds or were empirically related to dissimulation and might be included in a priori hypothesis.

The first of the validity scales is the Lie (L) scale. The L scale consists of 15 items which are considered to be virtuous by society but are unlikely to be honestly endorsed. As such the L scale is a crude measure of defensiveness. Unfortunately, Graham (1988) and Greene (1988) both suggest that due to the obvious pull of these

items, a responder with minimal sophistication will score low on this scale. Therefore, the L scale is likely to be a good measure of psychological sophistication, but not a good screening scale for identification of defensive responders (Greene, 1980). However, the L scale might prove useful in the differentiation of defensiveness in low functioning populations.

The F scale consists of 64 items designed to detect unique responses. Items for the scale were determined based on infrequency of endorsement in the normative sample. The F scale was considered to be the traditional index of malingering; however, Greene (1988) points to three reasons for elevation on this scale: (a) inconsistent patterns of response (e.g., random responding), (b) presence of actual pathology, and (c) malingering. The F scale does not tap a unitary construct and has components which are suggestive of self and social alienation, as well as bizarre and psychotic experiences (Dahlstrom, Welsh, & Dahlstrom, 1972). Elevations of the F scale are often seen in pathological populations that are not considered to be malingering. Greene (1988) suggested that only extreme elevations on this scale are sufficient to suspect malingering in lieu of serious pathology. Gough (1950) suggested that the F scale is best interpreted in relation to another validity scale (K scale). Greene (1980) suggested that an extremely low score on the F scale

might be an indicator of defensiveness. This might be an excellent scale to use in identifying defensive responders in a forensic facility given that the high base-rate of pathology and unusual circumstances experienced by the residents prior to their internment would suggest a relatively high F-score given accurate responding.

The K scale consists of thirty items that distinguished persons who displayed significant pathology yet had normal profiles from those with normal profiles and no evidence of pathology. The K scale is considered to be a measure of defensiveness (Greene, 1988). Mild to moderate elevations in the K scale have been associated with education level and are considered to be a reflection of one's ego strength (Graham, 1988; Greene, 1980). Five of the clinical scales have a proportion of K added to the score in order to better differentiate the clinical populations (McKinley, Hathaway, & Meehl, 1948). Unfortunately, little research has been conducted to verify this adjustment (Greene, 1980) or with special populations such as in a forensic settings. As such, MMPI research should be conducted with and without the K correction (Butcher & Telligan, 1978). Research involving the K scale has not differentiated populations well (Greene, 1980); however, given the level of pathology in forensic settings, the K scale might prove to be a valuable discriminator.

Currently the F and K scales are interpreted in relation to each other when dissimulation is suspected. The F-K index was posited by Gough (1950) as being able to identify both defensive and malingering responders. Specific cut-off scores have been suggested (e.g., Gough, 1950); however, Greene (1980) suggests that the population assessed be considered in determination of establishing cut-off scores. One would expect a relatively higher F in populations with high pathology and a relatively higher K in educated populations. Greene (1988) also suggests that adolescents tend to have relatively higher F-scores. As mentioned, assessing defensiveness using this scale might be confounded by education level and healthy ego defenses; however, this scale is likely to be more effective with forensic populations. The F-K index offers a single measure which addresses both malingering and defensiveness.

There are several other scales that might help to identify persons attempting to dissimulate their MMPI profile. The Gough Dissimulation Scale-Revised (DS-R) consists of 40 items which differentiated a group of neurotic patients from students and professionals asked to simulate pathology (Gough, 1957). Anthony (1971) suggests that the DS-R is more effective at identifying dissimulators than any other scale. Cutting scores which optimize identification of malingering have not been established.

Wiener and Harmon (1948) developed a subtle-obvious dichotomy for five of the ten clinical scales. This division was based on a rational inspection of the items. There are other subtle-obvious type scales reported in the literature (Wales & Seeman, 1968; Burkhart, Christian, & Gynther, 1978); however, there is less literature available on these scales and normative data are not available for them. The Weiner-Harmon scales can be used to help identify both malingering and defensive responders. Graham (1988) stated that the subtle-obvious scales are of little interpretive value because most of the subtle items would not have stood up to cross validation. However, Greene (1988) suggests that one should be suspicious of malingering if the T-score for the obvious items exceeds the subtle items by 20 on each of the five scales. The differentiation of defensiveness using the subtle-obvious scales are more complicated. Given that the items on the MMPI were empirically selected, there does not necessarily need to be a theoretical rationale for an item's inclusion on a scale. As such, the subtle items might not have any connection with the criterion with which they are correlated (Jackson, 1971). Further, Burkart et al. (1978) found that dissimulators would over-endorse subtle items when attempting to look favorable and would under-endorse subtle items when attempting to look bad. Posey and Hess (1985) have refuted the assertion that when attempting to

dissimulate favorably subtle scores tend to be over-endorsed. This debate has not been settled. Currently, the obvious items are interpretable and contribute the most to the identification of malingering and defensiveness. In a forensic setting with a high base-rates of pathology, the under-endorsement of obvious items might be a strong indicator of defensiveness.

The Carelessness Scale was developed by Greene (1978) as a measure of consistency in responses. The scale consists of 12 empirically selected pairs of items that are considered to be psychological opposites. The scale might be useful in the detection of a malingering responder as the malingerer might be over-endorsing pathology and therefore respond to items that are considered to be psychological opposites.

Goldberg (1965) developed an index based on a linear model designed to differentiate psychotic versus neurotic responders. His index is $(\text{Scale L} + \text{Scale 6} + \text{Scale 8}) - (\text{Scale 3} + \text{Scale 7})$. Forensic malingerers are likely to attempt to portray themselves as psychotic and this index might contribute to the identification of malingering. The last two scales discussed have relatively little research on dissimulation connected with them.

Wiggins (1966) developed 13 content scales based on rational inclusion validated by psychometric techniques. Lachar and Alexander (1978) claim that the content scales

are highly face valid and, therefore, susceptible to dissimulations. There has been little research on this topic. Given the above assertion concerning psychotic portrayal, it is possible that the Wiggins content scale for Psychoticism will be elevated in a forensic resident attempting to malingering.

Megargee and Mendelsohn (1962) developed the Overcontrolled-Hostility Scale based on their findings that extremely assaultive persons tended to have lower hostility ratings. Over-controlled responders are seen as rigidly responding to situations involving aggressive impulses. A forensic patient portraying himself in a defensive manner is likely to be engaging in this type of response style. Consequently, this scale might be beneficial in identifying defensive responders.

Cuadra (1953) developed the Control Scale by comparing profiles of outpatients and inpatients being treated for the same disorder. The rationale for the scale was based on the notion that staying out of the hospital required self-control. This scale might aid in identifying defensive responders who are attempting to present themselves in a controlled fashion.

Research using the MMPI to identify dissimulation usually involve intentional dissimulation which potentially contributes a large amount of variance. For example, how similar are profiles of college students asked to respond

as if they were trying to look psychopathological and a person who is trying to avoid a long prison term by appearing psychopathological? Other studies make an assumption of malingering or defensiveness based on group membership. Consequently, there is a dearth of studies relating dissimulation to forensic populations who are taking the test under realistic conditions.

Anthony (1971) had forty members of the United States Air Force take the MMPI, first under standard conditions and then with an instructional set to exaggerate pathology. thirty-two of these exaggerated profiles were matched with valid profiles of similar clinical configuration. Results suggested that persons are able to exaggerate pathology with the MMPI. Endorsement of the subtle items differentiated the standard and exaggerated profiles with the greatest proficiency; however, the obvious scale, DS-R scale, F scale raw score and F-K index all differentiated the two profiles with over 80% proficiency. The subtle items were underendorsed in those groups attempting to simulate pathology. The F raw score, F-K index and DS-R scales all differentiated the matched MMPI profiles from the simulated. The hit rates were much lower than the first comparison.

This study is important because it points out several flaws in this style of research. The intentionally dissimulated profiles were relatively easy to identify

(compared to matched profiles), suggesting that this situation might not mimic clinical administration. The obvious and subtle items were significant differentiators in the first comparison but not in the second. This study involved multiple administrations of the MMPI which enters an added degree of variance. Finally, for forensic purposes, this study involved using male military officers. This might not be a good group from which to generalize results.

Grow, McVaugh and Eno (1980) evaluated several different MMPI detection techniques related to dissimulation. One hundred and fifty undergraduate students were asked to take the MMPI in conditions of faking bad, faking good, and accurately. In general, results suggested that the detection of the fake-bad group was easier than the detection of the fake-good group. Faking bad was best identified by an $F > 14$ or $F-K > 6$. These counted for approximately 80% of the variance. The DS-R and Obvious items also were excellent discriminators; however, the subtle items did not contribute significantly to detection. Faking good was best identified by $F-K < -11$. This accounted for only 36% of the variance. The cutting scores in this study are clearly not applicable to a forensic setting which has a much higher base-rate of pathology than undergraduate students.

Grow et al. (1980) cross-validated these results with clinical populations. This was accomplished via a record review of a state mental hospital and adjacent outpatient clinic. The fake-bad group was identified by the following criteria: (a) an MMPI profile which suggested more pathology than presentation, (b) situational variables which suggested motivation for faking bad, and (c) a statement in the final report suggesting the possibility of faking bad. The fake-good group was identified by the following criteria: (a) an MMPI profile which suggested less pathology than did the rest of the evaluation, (b) situational variables which suggested motivation for faking good, and (c) a statement in the final report suggesting the possibility of faking good. The legitimate group was based on MMPI profiles judged accurate by the testee's therapist while undergoing therapy. Results of this cross-validation were similar to the first experiment. The cut-off scores for the fake-bad group were higher and less of the variance was explained. The fake-good discriminator was the same yet explained a greater percentage of the variance. This suggests that with clinical groups, faking good on the MMPI might be more easily detectable than in normal groups. This study is obviously flawed by circularity in that the MMPI profile is part of the inclusion criteria to help differentiate MMPI profiles. Further, one who is attempting to fake-bad or fake-good

would do so over the entire evaluation and not only on the MMPI. As such, the criterion groups for this cross-validation might be representative of variance un-attributable to dissimulation.

Gallucci (1984) conducted a study designed in a manner which did not directly instruct the participants to dissimulate. Gallucci divided patients seeking compensation or pension based on disability from the Veterans Administration according to where in the process the testee was in terms of receiving compensation. Although not asked to dissimulate, the testees were taking the test as part of an experiment. As such the administration of the MMPI was still not "in vivo." Only the F and F-K scales were looked at and results suggest that the F-K is somewhat more effective between groups discriminator than the F scale. This study is flawed by the assumption of malingering based solely on group membership. Severity of pathology in relation to the various stages of seeking disability is a major confound.

Studies using the MMPI in forensic populations tend to have many of the flaws mentioned above. Audubon and Kirwin (1982) conducted a study designed to differentiate defensive responders using the MMPI and 16 PF (another objective personality inventory). Forty-five straight admissions to a forensic unit of a state hospital were administered the above instruments and 20 of these testees

were divided into high defensiveness and low defensiveness groups based on their performance on these tests. Both the low and high defensiveness groups did not appear to be responding in a manner indicative of response bias. High defensive responders tended to admit to less pathology, and would admit to past pathology when making these admissions. High defensive responders tended to have committed the more serious crimes (e.g., murder). High defensive responders tended to be least defensive regarding admissions of a sociopathic orientation. This study is flawed by its selection of groups based on the tests. Consequently, results might be tautological in that persons are labeled "defensive" because they don't admit to pathology and then conclusions are made stating that "defensive" persons do not admit to pathology. Further, the authors do not address the notion that one is not admitting to current pathology because it might no longer exist. Defensive responding suggests that pathology exists that is not admitted to. In this study the existence of pathology is assumed but is not determined. Finally, given the population studied, the "low defensiveness" group might be a malingering group and they might be responsible for the significant results.

Lanyon and Lutz (1984) also looked at the construct of defensiveness in terms of MMPI profiles. The authors used a population of sex offenders. The subjects were males who

were undergoing competency or insanity evaluations. Over 80% of the subjects were accused of child molestation and convictions were either obtained or "anticipated by the police." Subjects were divided into no denial, full denial and partial denial based on admission of sexually deviant behavior. The MMPI was administered as part of the evaluation and not as part of an experimental protocol. Results suggested that the full and partial denial groups responded similarly on the MMPI and that they both differed appreciably from the no denial group. A combination of the validity scales seemed to discriminate denial from no denial the best. Criterion selection for groups in this study is appreciably better than the previous studies; however, the assumption of group placement based admission is tautological.

Walters (1988) compared the MMPI profiles of three different populations within a federal penitentiary and inferred motivation in terms of dissimulation based on group membership. The three groups in this study were: (a) those considered for parole (presumed defensive), (b) those considered for solitary confinement (presumed malingering), and (c) those considered for therapy (presumed honest). The MMPI's were administered as part of the standard operating procedure and were not part of an experiment. Results suggest that it is easier to detect exaggeration than defensiveness on the MMPI. The F, F-K,

Weiner Obvious Scales, Mania and Hysteria Subtle Scales, and Ds-R scales all showed differences between the three groups. Only the DS-R, Depression-Obvious and Hysteria-Obvious differentiated the honest and defensive groups. Hit-rates greatly improved on chance when employed. The assumption in regard to dissimulation based on group membership is a major flaw of this study. As mentioned by the authors, the honest group might well have been defensive. Further single-cell requesters are likely to have a higher base-rate of pathology compared to the other groups. However, the realistic use of the MMPI and the populations used both combine to make this a useful study.

A study involving the detection of malingering using the MMPI and a forensic population was conducted by Wasyliv et al. (1988); however, this study also made the assumption of malingering based on MMPI profiles without external validation. This study compared a group of persons undergoing a competency/insanity evaluation (inferred to be malingering) and a group already found NGI (inferred to be a control group). Subjects were further divided according to the severity of the crime. The MMPI profiles were divided into not exaggerated, equivocal and clearly exaggerated based on the validity scales. Comparison between the two groups suggested that the evaluation group was significantly higher on the F, F-K, Ds-R, and

Obvious-Subtle scales. There were not significant differences between the two groups on measures of defensiveness (e.g., L and K scales) or when the subtle items were compared without the obvious ones. The range of profiles showing evidence of malingering were between 26% to 57% for the evaluation group and between 13% and 33% in the control group. The potential punishment correlated positively with the incidence of suspected malingering in the evaluation group. This study has several flaws. There were no external criteria for malingering except for the MMPI. The control group has undergone treatment and the evaluation group has not. Further, the control group has incentive to be defensive and differences might well be due to defensive responding and not malingering. This study is important because it does suggest that assumptions regarding group membership and dissimulation might be accurate. Further, baseline information (based solely on MMPI profiles) concerning the incidence of malingering is offered. Finally, this study considers the relative differences in external motivation (i.e., crime severity) in terms of the incidence of malingering.

Walters, White and Greene (1988) conducted a study involving malingering in forensic facilities using the MMPI which did not infer malingering status based on group membership or MMPI results. Inmates in a maximum security federal prison were administered the Psychiatric Diagnostic

Interview (PDI) and those with significant psychopathology based on the interview were included in the study. The MMPI was also administered. Two psychologists rated these inmates on a four point scale in which Level One was no behavioral verification of illness suggested in interview (malingering) to Level Four which was inmates displaying a pattern of behavior consistent with the results of the interview. Unfortunately, this study is flawed in that the raters were aware of the standard scales on the MMPI and the ratings were made approximately 1-14 months after the interview. This study was important because it employed a realistic situation and made an external effort at verifying malingering behavior.

Walters et al. (1988) suggest that approximately 60% of the inmates are accurately portraying their behavior. The traditional MMPI scales did not significantly differentiate the groups; however, five of the specialty scales were significant. They were DS-R, Obvious total, Obvious-Subtle ratio, Depression subtle and Mania obvious. Only the DS-R and Depression subtle scales improved accurate classification compared with the base-rates. This study demonstrates the importance of establishing an accurate base rate of disorder when attempting to predict it's occurrence.

Purpose of Current Study and Specific Predictions

This study is intended to explore the incidence of malingering and defensiveness in a forensic setting, as well as, using the MMPI to differentiate these groups and allow for identification based on MMPI results. Relationships between the constructs of dissimulation, legal status and severity of crime will be explored. Further, inter-professional opinions concerning the incidence of these constructs will be explored. As indicated, the artificial nature of previous research into the use of the MMPI in the identification of dissimulation are the major flaws in this body of research. Realistic studies involving patient populations and independent criteria concerning the identification of malingering and defensiveness are needed. This study addresses this issue by having therapists, psychologists and psychiatrists evaluate each of the residents in terms of a malingering-defensiveness continuum. Inter-rater agreement will result in three broad classifications of exaggerating pathology, minimizing pathology or accurate portrayal of pathology. This rating will not infer conscious intent. Specific hypothesis concerning these broad constructs are not offered a priori; however, their MMPI profiles will be contrasted with the other broad groups and the relationship between membership in these broad groups and severity of crime and legal status will be explored.

Those seen as minimizing or exaggerating pathology will be further classified into two more circumscribed groups if such portrayal is considered to be the result of conscious intent. These two groups will be classified as malingering and defensive. These ratings will be based on the professional's interaction with the resident and will form the criteria groups. No predictions are made concerning differences between the professionals and the suspected incidence of dissimulation. However, it is believed that; (a) more of the residents who are NGI will be classified into the defensiveness group, (b) more of the residents who are IST will be classified into the malingering group, and (c) severity of crime will be less significant a factor than legal status in terms of being classified as a malingerer or defensive responder. These hypothesis are important as their validation would suggest that some of the assumptions made in previous research described above were likely to be accurate.

The MMPI will be administered as part of the standard operating procedure at the NFETC and therefore no variance due to an artificial experimental situation will be entered. The circumscribed groups (malingering and defensive) will be contrasted with their broader groups (exaggerating and minimizing); however, no specific hypothesis are offered. It is hypothesized that the three groups (accurate, malingering and defensive) will be

differentiatable based on the MMPI profile. In particular, it is hypothesized that the malingering group will be differentiated from the accurate group by the following seven scales.

1. The DS-R will be greater in the malingering group than in the accurate group.

2. The F-K index will be greater in the malingering group than in the accurate group.

3. The K scale will be less in the malingering group than in the accurate group.

4. The ratio of total obvious to total subtle items on the Weiner-Harmon obvious-subtle scales will be greater in the malingering group than in the accurate group. This difference should hold for each of the individual scales and will mainly be due to the increase in endorsement in the obvious items and not due to preferential responding to the subtle items.

5. The Wiggins Psychoticism scale will be higher for the malingering group than in the accurate group.

6. The Goldberg index will be greater for the malingering group than for the accurate group.

7. The Carelessness index will be greater for the malingering group than the accurate group.

It is predicted that the defensive group will differentiate themselves from the accurate group by the following six scales.

1. The F scale will be lower in the defensive group than in the accurate group.
2. The F-K index will be lower in the defensive group than in the accurate group.
3. The K scale will be higher in the defensive group than in the accurate group.
4. The overall ration of obvious to subtle items on the Weiner-Harmon obvious-subtle scales will be lower in the defensive group than in the accurate group. This will likely be due to the relative underendorsement of obvious items rather than the subtle items.
5. The content scale for Over-controlled Hostility will be higher in the defensive group than in the accurate group.
6. The content scale for Control will be higher in the defensive group than in the accurate group.

In the above comparisons, individual analysis of each of the separate subtle-obvious scales will also be conducted. For those scales which do significantly differentiate the above groups, further analysis will be run in order maximize correct classification.

CHAPTER 2 METHODS

Setting and Subjects

The incidence of malingering and defensiveness, as well as, a more broadly defined group of persons seen as exaggerating or minimizing pathology in a forensic setting was investigated. The forensic facility used in this study was the North Florida Evaluation and Treatment Center (NFETC), located in Gainesville, Florida. The NFETC is one of three maximum security forensic treatment centers in the state of Florida and is run by the Health and Rehabilitative Services (HRS) branch of the state government. The NFETC is a three unit, 10 building facility which included a Mentally Disordered Sex Offender Unit (MDSO) for part of the study; however, this population was excluded from this research. The other two units are herein referred to as general units and are composed mostly of persons adjudicated Incompetent to Proceed (ITP), as well as a smaller percentage of those found Not Guilty by Reason of Insanity (NGI) (see Table 2-1).

This population has been considered as requiring a restrictive setting. This is usually a result of being seen as dangerous to either themselves or others. Those requiring less restrictive settings are not sent to NFETC.

Table 2-1: Legal Status of Residents at NFETC

Status	Number	Percent
ITP	98	68.1
NGI	45	31.2
Other	01	0.7
Total	144	100.0

A third general unit (also composed of persons adjudicated ITP or NGI) was opened midway through this study and persons admitted to this unit were included in this study. All residents at the NFETC were male. The age range for the residents included in this study was from age 18 to 59. The subjects in this study approximate the racial distribution of the residents at the NFETC and are approximately 40% black, 40% white and 20% Hispanic. The severity of the crimes of the residents is presented in Table 2-2. One hundred and forty four residents at the NFETC were included in this study. This represents all of the admissions from April 1, 1989 to December 1, 1989 excluding those admitted for the MDSO program.

Upon arrival at the NFETC each resident participates in an admissions interview, as well as, weekly evaluations during building rounds which are conducted throughout his first month following admission. Members of his interdisciplinary treatment team are present throughout this process. Treatment team members include a therapist, psychiatrist and psychologist. The admissions interview is conducted primarily by the psychiatrist; however, the other professionals are actively involved in the interview. Initial screening for both medical and psychological therapies are conducted during the admissions interview. A partial focus of this interview is diagnostic. The resident has an opportunity to ask questions during this

Table 2-2: Severity of Crimes per Resident at NFETC

Felony Status	Number	Percent
1	33	22.9
2	23	16.0
3	88	61.1
Total	144	100.0

interview. The resident is also informed of the general expectations regarding his behavior during his treatment at the NFETC. The weekly rounds are also conducted primarily by the psychiatrists and focus on the maintenance and reformulation of the treatment plan. This includes both the medical and psychological treatments. In addition to these planned interactions between the resident and his treatment team, individual members of the team are consulted as needed if problems arise.

The therapists have variable training; however, most have some graduate work in the field of human services. All of the therapists have undergraduate college degrees. Twenty-five therapists participated in this study. They have regular contact with the resident and are primarily responsible for the implementation of non-medical therapies and treatment plans. The therapists have the most frequent contact with the resident among the treatment team members. Therapists had case-loads varying from six to ten residents. The psychiatrists are licensed physicians with a specialty in the area of psychiatry. Six psychiatrists participated in this study. They are primarily responsible for the medical therapies. The psychiatrists' case-loads were variable and ranged from twenty to seventy residents. The psychologists are licensed in the field of psychology (three at the doctoral level). There was one master's level clinician. They are involved in the supervision of

non-medical therapies. The psychologists were each assigned to a unit which includes approximately sixty residents.

Evaluations of the residents were routinely completed by Psychology Services within the first thirty days of admission. The evaluations were tailored to the needs of the individual resident; however, most evaluations included a clinical interview and an attempt to administer the MMPI. A copy of the psychology services evaluation is placed in the residents NFETC record and is available to the treatment team. The resident is informed of this, as well as, the general limits of confidentiality concerning the evaluation. At times; however, the resident is not considered able to participate in formal testing. This is usually because he is seen as grossly psychotic. Psychology Services consists of the three licensed psychologists that are mentioned above and two masters-level assistants who are graduate students at the University of Florida. The psychology assistants participated in the thirty-day assessments but are not part of the treatment teams.

Materials and Measures

All of the general admissions (those not admitted to the sex offender unit) to the NFETC over an eight-month period extending from April 1, 1989 to December 1, 1989

were included in this study. In addition, other residents who were seen by Psychology Services and were administered the MMPI as part of the assessment were included; however, the same resident was not included twice. This situation only occurred once during this period. Approximately thirty days after the resident's admission the three members of his treatment team mentioned above (therapist, psychologist and psychiatrist) were sent a two scale instrument (Figure 2.1) which was accompanied by instructions (see Appendix). The first scale is a continuum designed to differentiate the resident in terms of whether he is seen as exaggerating or minimizing his psychopathology. This scale is known as the dissimulation (DISS) scale. The scale had a range of 0 to 15.5 c.m. This did not allow for the classification of malingering or defensiveness as defined in the introduction; however, it allowed for broad classification of the resident as accurate, exaggerating or minimizing without inferring intent. The second scale is also a continuum and allowed for the differentiation of that subset of residents who were seen as exaggerating or minimizing that could be further classified as malingering or defensive. This scale is known as the conscious intent (CON) scale. This scale also had a range of 0 to 15.5 c.m. Ratings were completed before the psychological evaluation by Psychology Services.

Figure 2.1: Dissimulation Rating Form

Please rate the following resident prior to his thirty-day review by Psychology Services based on your opinions formed during your contact with him and historical information available to you.

Name:

Date:

Place an X mark on the position in the line to which you feel the above resident's portrayal belongs on the following two continuums.

Resident behavior
and self-report
appear to be a
minimization of
his level of
psychopathology.

Resident behavior
and self-report
appear to be an
exaggeration of
his level of
psychopathology.

Above portrayal
appears to be
the result of
unconscious
intent or without
external motivation.

Above portrayal
appears to be
the result of
conscious intent
due to external
motivation.

In addition to the above ratings, information concerning the residents legal status (ITP or NGI), and severity of crime based on the Florida felony statutes (Felony 1, Felony 2 and Felony 3) were gathered. Persons classified as ITP were coded as 1 and persons classified as NGI were coded as 2. One resident was admitted on a Baker Act (a civil commitment) and he was excluded from the rest of the study. Felony one offenses are the most severe and life sentences were classified as Felony one. Felony three offenses represent the least severe of the felonies and misdemeanors were coded as Felony three. If there were more than one offense, the most severe offense was recorded. Felony one offenses were coded as 1, felony two offenses were coded as 2 and felony three offenses were coded as 3.

Procedure

There were 144 admissions during the period of this study. Ratings forms were sent out via inter-center mail for all of these. Responses were requested within three days of receipt of the rating scales. Responses were returned via inter-center mail. If no response came a second mailing was initiated; however, if raters were no longer ignorant of test results they were not sent ratings forms. Therapists responded to 142 of the forms, psychologists responded to 142 of the forms and

psychiatrists responded to 137 of the forms. The response rates for each of the professional groups as well as overall response rate are listed in percentage form in Table 2-3. There were 134 residents for whom complete rating forms were returned by all three professionals. Therefore, 93% of the initial pool of admissions were included in this study.

MMPI profiles that were administered by Psychology Services were gathered and information regarding the validity scales, clinical scales and additional scales discussed in the introduction were collected. The raw and T-scores for the clinical scales that were K-corrected were gathered. The Wiener-Harmon obvious and subtle scores were collected. Additionally, the following special scales were also collected: Goldberg Index, Psychoticism, Control, Over-controlled hostility, Gough dissimulation index-revised, Carelessness index, Cannot Say scale. MMPI's were not administered as part of this study. The residents took the MMPI in the normal clinical setting and the data was gathered via record review. The rationale for the inclusion of the scales listed above are offered in the introduction. The raw scores for those scales that are not K-corrected (scales 2,3,5,6,0, the validity scales and special scales) were not separately analyzed as this would duplicate the analysis of the T-scores. The total obvious and total subtle scores were derived by summing the

Table 2-3: Response Rates per Professional Group

Profession	# Sent	# Returned	% Returned
Therapist	144	142	98.6
Psychologist	144	142	98.6
Psychiatrist	144	137	95.1
Total	432	421	97.5

T-scores of the individual obvious and subtle scales. For those scales which are K-corrected both the raw scores and T-scores were analyzed. As such, the utility of the K-correction with this population was assessed. The F-K index was derived by subtracting the raw score on the F scale by the raw score on the K scale.

MMPI profiles were included only if they were considered "valid." The following criteria were considered in determining whether to exclude MMPI profiles:

1. Cannot Say Scale > 30 were excluded. Greene (1980) noted that when this scale is less than thirty the profile is not appreciably altered.
2. Exclude all T profiles.
3. Exclude all F profiles.
4. Exclude all random profiles according to Greene (1980).

This was done by both visual inspection of both the profile and answer sheet. No completed MMPI profiles were excluded from the study although several administrations were discontinued by the examiners as a result of the above processes.

Only complete MMPI profiles were included. No short forms were included. The psychology clinic utilizes both Form G and Form R of the MMPI. Although the 566 items are presented in different order on the two forms, they include the same questions. The MMPI could be administered in the

standard fashion or via an audio tape. The audio tape version is available in both English and Spanish. All residents with questionable reading skills are screened using the Wide Range Achievement Test-Reading Test. Those with below a sixth grade reading score were administered the audio tape version. Further, those with vision problems were also administered the audio tape version. Residents with limited intellectual capacities would often not be administered the MMPI. This determination is made by the person who is conducting the assessment. Those residents who completed the MMPI were coded 1. Those residents for whom the MMPI was not attempted were coded 2. Those residents for whom the MMPI was attempted but not completed were coded 3. The failure to complete the MMPI was due to factors related to the resident's behavior and not external time considerations. There were 68 completed MMPI profiles, this is 47% of the original sample.

Analysis

All statistical analysis were run using SAS statistical programs or were done by hand. The differences between the ratings of CON and DISS were compared between the three professional groups. This was done using a repeated measures ANOVA. As such, the normality of each of the distributions on the CON and DISS variable by professional was assessed. Appropriate transformations

were run for those that were not normally distributed. Repeated measures was used since the same resident was being rated by three separate professionals. Where there were no significant differences between the professional groups the scores were averaged together. Outlying groups were analyzed separately on the dimension for which they did not agree with the other professionals. Differences between the categorical variables of legal status (status), f-code and MMPI status (MMPI) were compared with the DISS and CON ratings using analysis of variance. Differences between the categorical variables were determined using Chi square analysis. Chi square analyses were run comparing fcode x status, MMPI x status and fcode x MMPI.

The DISS scores were divided into those seen as exaggerating, accurate and minimizing based on the distribution of these ratings. The range of responses for the DISS variable was divided into thirds. Those in the left most third were classified as minimizing. Those in the middle third were classified as accurate. Those in the right most third were classified as exaggerating. These groups were compared on the collected MMPI variables using a multivariate analysis of variance (MANOVA). The MANOVA controlled for family-wise error common when making many comparisons. Prior to running the MANOVA, the normality of each of the collected MMPI variables was assessed. Those

that did not have a normal distribution were transformed appropriately.

MANOVA analysis was also run to compare the added dimension of CON and the MMPI variables. Conscious intent was inferred when the resident received a rating greater than or equal to 7.0 on the CON scale. Those persons who were classified as exaggerating on the DISS scale and received a CON rating of greater than 7.0 were classified as malingering. Those persons classified as exaggerating on the DISS scale with a CON score of less than 7.0 were considered as exaggerating. Residents who were classified as minimizing on the DISS scale and received a CON score greater than 7.0 were classified as defensive. Residents who were classified as minimizing on the DISS scale and had a CON score of less than 7.0 were classified as minimizers. The accurate group was not affected by the CON ratings. Table 2-4 schematically represents the groupings mentioned above.

Additionally, MANOVA's were run to compare MMPI variables and the categorical variables of status and fcode. The mean MMPI profiles for all the groups and the overall MMPI profile were plotted. The MMPI variables Cannot Say and Careless were analyzed using the Chi Square technique because they were not distributed in a fashion which allowed for transformation to normality. The Careless variable was translated into a categorical

Table 2-4: Classification of Residents

	Group	Rule
Variable DISS	Minimizing	DISS Lower 1/3
	Accurate	DISS Middle 1/3
	Exaggerating	DISS Upper 1/3
Variable CON	Minimizing	DISS Lower 1/3, CON < 7.0
	Defensive	DISS Lower 1/3, CON ≥ 7.0
	Accurate	DISS Middle 1/3
	Exaggerating	DISS Upper 1/3, CON < 7.0
	Malingering	DISS Upper 1/3, CON ≥ 7.0

variable in which scores greater than four were considered "high" and scores less than or equal to four were considered "low." This was based on Greene's (1980) recommendation of significance concerning this variable. The Cannot Say scale was translated into a categorical variable in which scores greater than five were considered as "high" and scores less than this were considered as "low."

Discriminant analysis, principle component analysis and multiple regression analysis were run to determine if a prediction equation into DISS categories could be obtained using the data gathered. Further these analyses determine the multicollinearity of the data and allow for the determination of independent factors contributing to the overall variance of the model.

CHAPTER 3 RESULTS

Inter-Professional Agreement

The mean dissimulation (DISS) ratings given by the therapists, psychologists and psychiatrists regarding the residents are presented in Table 3-1 along with the standard deviations. The mean consciousness (CON) ratings given by the therapists, psychologists and psychiatrists regarding the residents are presented in Table 3-2 along with the standard deviations. There are fewer consciousness rating scores than dissimulation scores as would be expected given the instructions which state that a consciousness score is not needed for one who is seen as accurate.

The DISS and CON ratings by each professional were assessed for normality. The skewness, kurtosis, box plots, normal probability plots and tree diagrams were evaluated. The raters' responses were normal for both DISS and CON and therefore repeated measures ANOVA's were appropriate to analyze these data.

A repeated measures ANOVA was run to determine if there were differences between the three professional groups on the dissimulation dimension. The overall DISS model yielded an F score of 2.14 which correlates to a

Table 3-1: Dissimulation Rating per Professional Group

Profession	Number	Mean	Standard Deviation
Therapist	142	6.14	2.98
Psychologist	142	6.15	2.43
Psychiatrist	137	5.47	3.26

Table 3-2: Consciousness Rating per Professional Group

Profession	Number	Mean	Standard Deviation
Therapist	115	7.11	3.70
Psychologist	126	7.50	2.93
Psychiatrist	130	6.08	3.83

P-value of .12. As such, there were no significant differences between professional groups on the DISS scale. This allowed for the creation of a new variable, $NDISS = (\text{therapist DISS score} + \text{psychologist DISS score} + \text{psychiatrist DISS score})/3$, which is the average of the three professional groups. The NDISS variable will be used in the rest of the analysis involving dissimulation.

A repeated measures ANOVA was run to determine if there were differences between the professional groups on the CON dimension. The overall CON model yielded an F score of 2.99 which correlates to a P-value of .05. As such, there were significant differences between the three professional groups. A post-hoc test, the studentized range statistic (Weiner, 1969), was run to determine which groups differed from each other. The psychologist and psychiatrist comparison yielded a q-value of 6.76 which is significant at the .01 level. The therapist and psychiatrist comparison yielded a q-value of 4.90 which is also significant at the .01 level. The therapist and psychologist comparison yielded a q-value of 1.36 which was not significant. Consequently, the psychiatrists differed significantly from the therapists and psychologists while the therapists and psychologists did not differ from each other. As a result, a new variable $VAR = (\text{psychologist CON} + \text{therapist CON})/2$ was created. This is an average of the therapist and psychologist rating on the CON dimension. A

second variable VAR2 = (psychiatrist CON) is simply the psychiatrist rating of CON. Subsequent analysis using the CON dimension were run using both VAR and VAR2.

Group Differences

Differences between the variable NDISS and the variables of felony code (fcode), legal status and ability to complete the MMPI (MMPI) were assessed using analysis of variance (ANOVA's). There were no significant differences in the DISS ratings and the resident's legal status, felony code or ability to complete the MMPI. ANOVA's were also run comparing the VAR and VAR2 variables and the variables of fcode, legal status and MMPI. As with DISS there were no significant differences in the CON ratings and the resident's legal status, felony code or ability to complete the MMPI.

Additionally Chi-square analyses were run to compare the categorical variables of status, MMPI and fcode. There were no significant differences on these. Severity of felony is not related to legal status or ability to complete the MMPI. Neither is the resident's legal status related to his ability to complete the MMPI. Overall, the ratings of CON and DISS were not correlated with the categorical variables of status, fcode or MMPI.

Division into Groups

The NDISS rating was divided into three groups. These groups were known as accurates, minimizers and exaggerators. This was done by dividing the range of scores (0-12.9) on the NDISS variable into thirds. The minimizers (min) were those with NDISS ratings of 0-4.3. The accurates (acc) were those with NDISS ratings of 4.3-8.7. The exaggerators (egg) were those with NDISS ratings of 8.7-12.9. The breakdown of residents in terms of numbers and percentage of sample in each of the three groups is presented in Table 3-3. Those with DISS scores but not CON scores were excluded. This only affected the size of the accurate group which was the majority of responses. This was done so that the CON and DISS populations would be the same sample size.

The groups were further divided based on the CON ratings as delineated in the methods section. As mentioned there were significant differences between the CON ratings of the psychiatrists and the other two professional groups. Therefore this additional division will include VAR and VAR2. The breakdown of residents in terms of numbers and percentage of sample for the five groups (egg, mal, acc, min, and def) for VAR is presented in Table 3-4. The breakdown of residents in terms of numbers and percentage of total sample for the five groups for VAR2 is presented in Table 3-5. The difference between VAR and VAR2 is that

Table 3-3: NDISS Groups

Group	Number	%
Accurates	56	61.5
Minimizers	26	28.6
Exaggerators	09	9.9
Total	91	100.0

Table 3-4: VAR by Groups

Group	Number	%
Accurates	56	61.5
Minimizers	15	16.5
Defensive	11	12.1
Malingers	09	9.9
Exaggerators	00	0.0
Total	91	100.0

Table 3-5: VAR2 by Groups

Group	Number	%
Accurates	56	61.5
Minimizers	19	20.9
Defensive	07	7.7
Malingers	06	6.6
Exaggerators	03	3.3
Total	91	100.0

the psychiatrists tended to rate lower on the CON variable and, therefore, implied less conscious intent to dissimulated behavior.

For all the groups there tended to be a large number of persons considered to be accurate and a very small number considered exaggerating or malingering. Further these numbers are even smaller when considering those with completed MMPI profiles. As such statistical significance when comparing group differences on the NDISS, VAR and VAR2 variables will require large differences in clinical significance.

MMPI Analysis

The overall mean MMPI profile was gathered and is plotted in Figure 3-1. The collected supplemental scales are plotted in Figure 3-2. The mean MMPI profile and supplemental scale profiles for each of the categorical group variables are presented in Figures 3-3 through 3-12. It should be noted that since all of the MMPI profiles garnered in the exaggerator category were seen by the psychologists and therapists as malingering there is not a separate figure for the VAR = malingering as this is exactly the same profile as NDISS = egg. Further there is no figure for VAR = egg as all of these were also considered to be malingerers and are the same as the NDISS = egg category.

Figure 3.1: Standard MMPI Profile of Total Sample

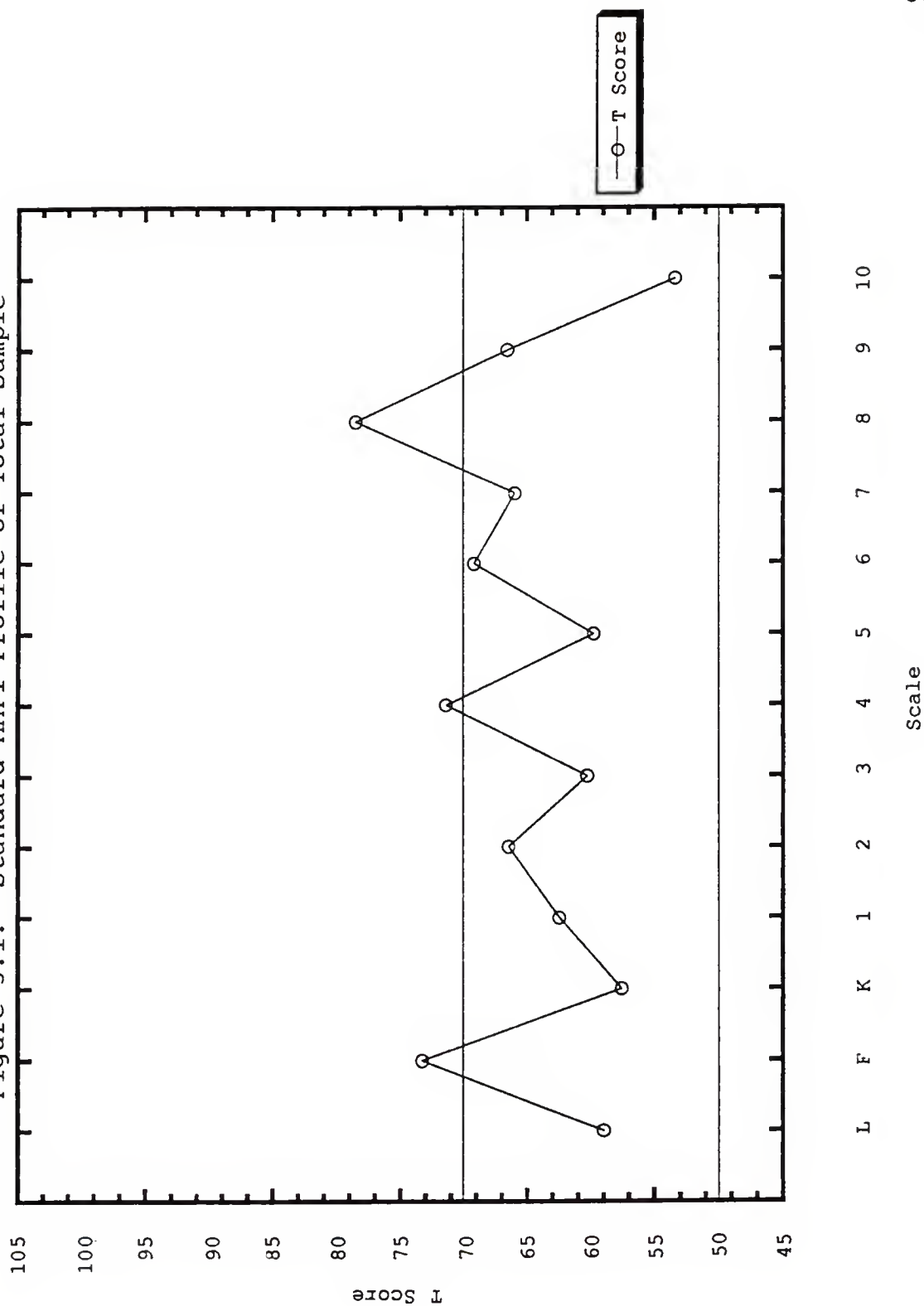


Figure 3.2: Supplemental Scales of MMPI for Total Sample

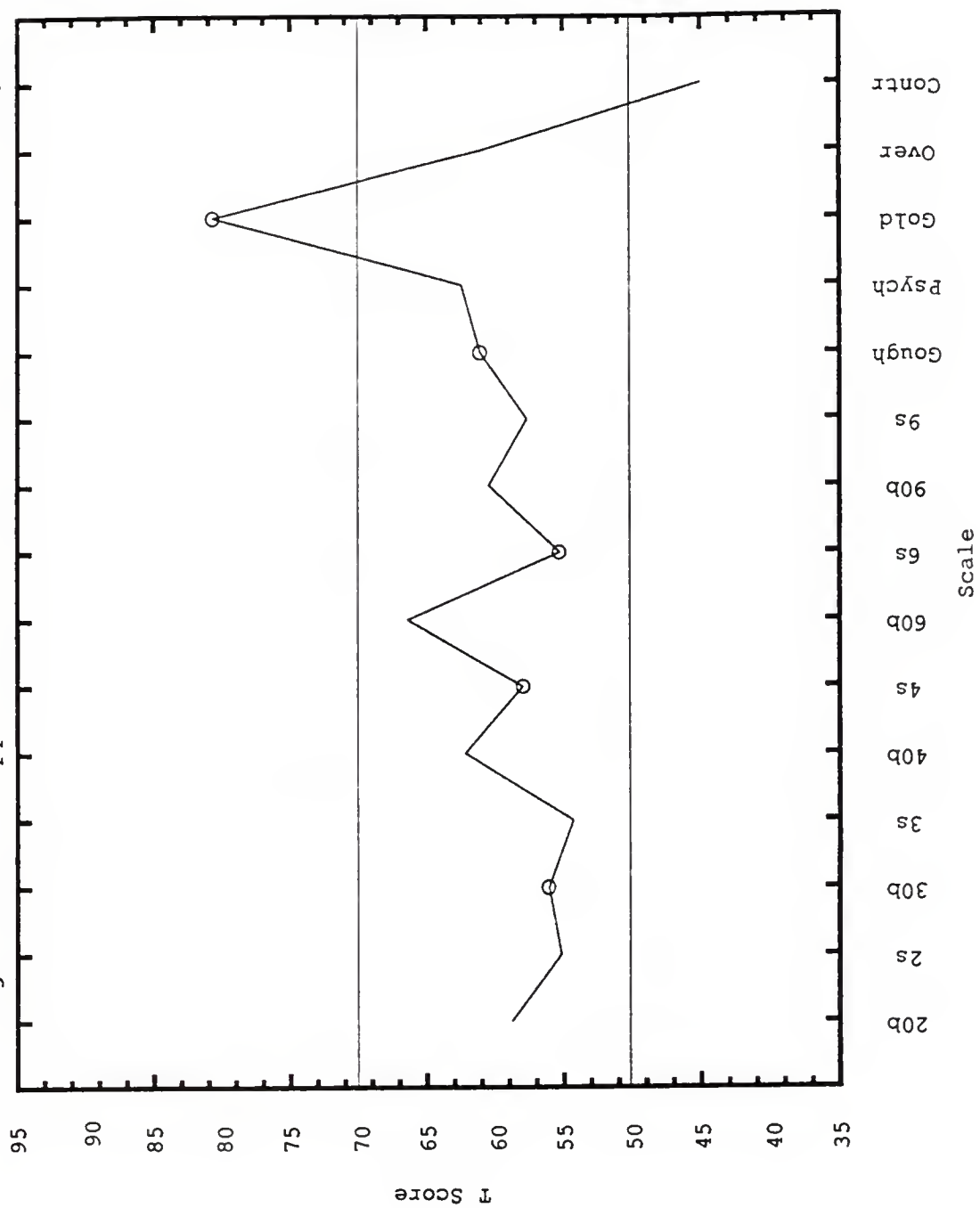


Figure 3.3: Standard MMPI Profiles of NDISS Groups

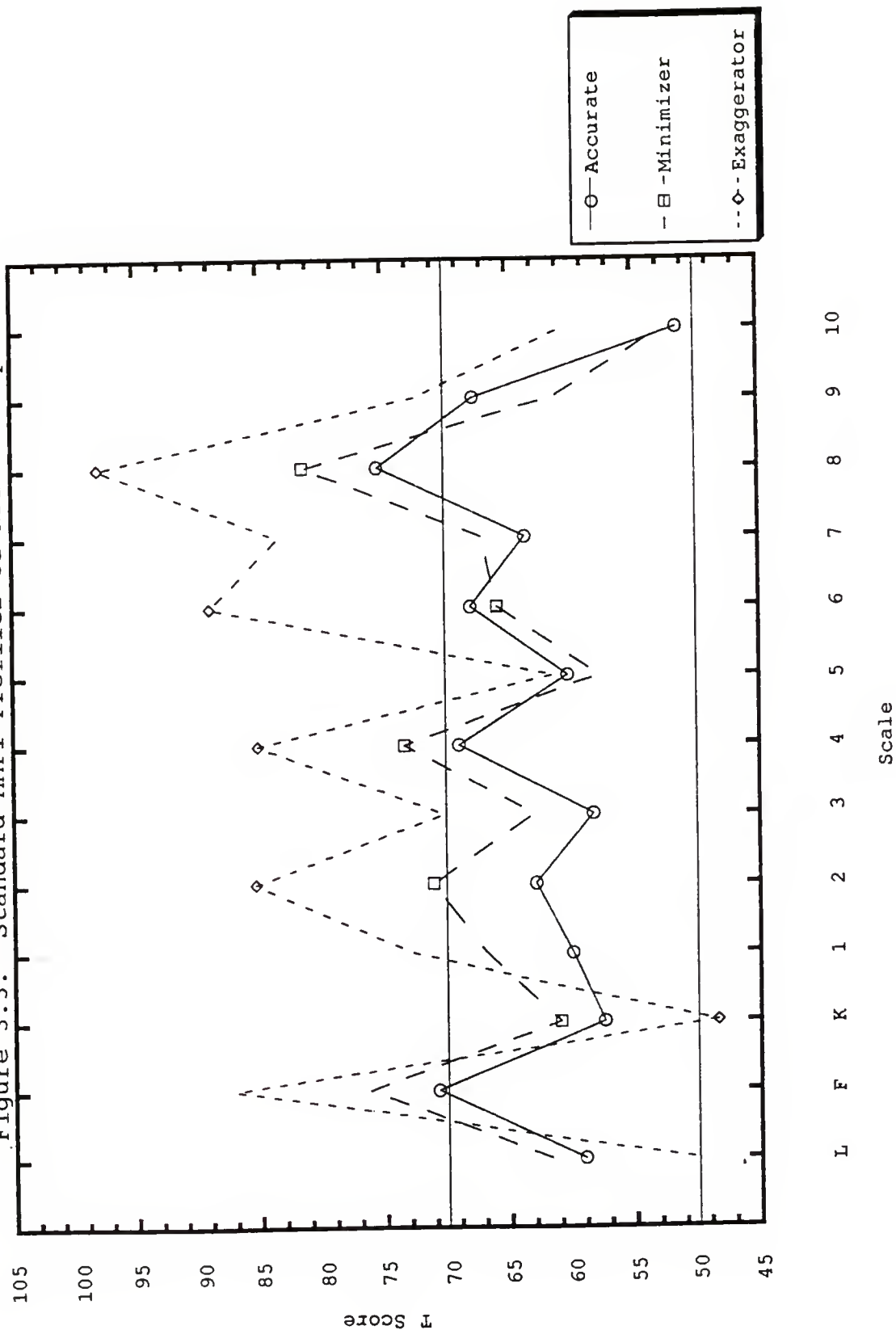
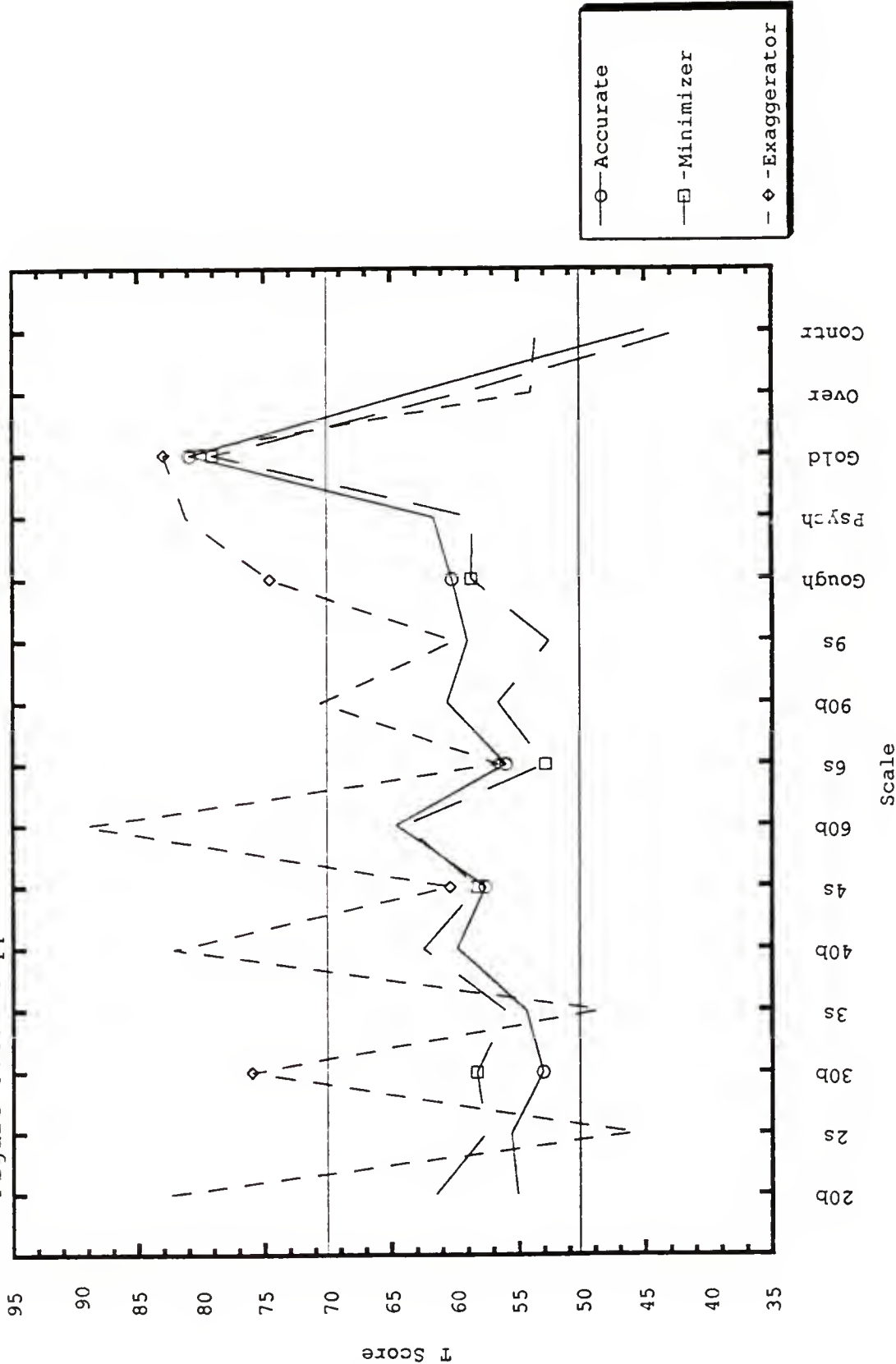
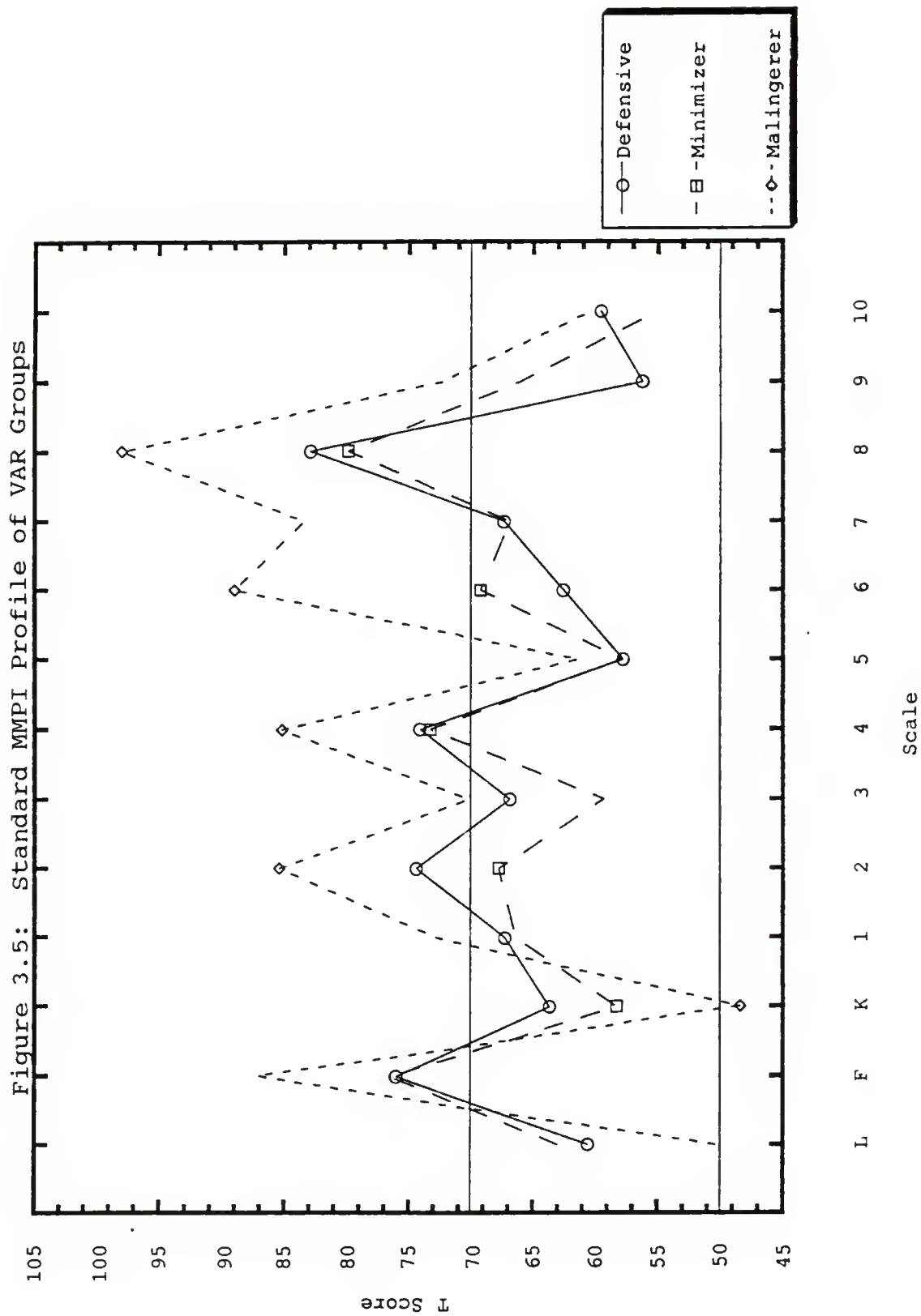
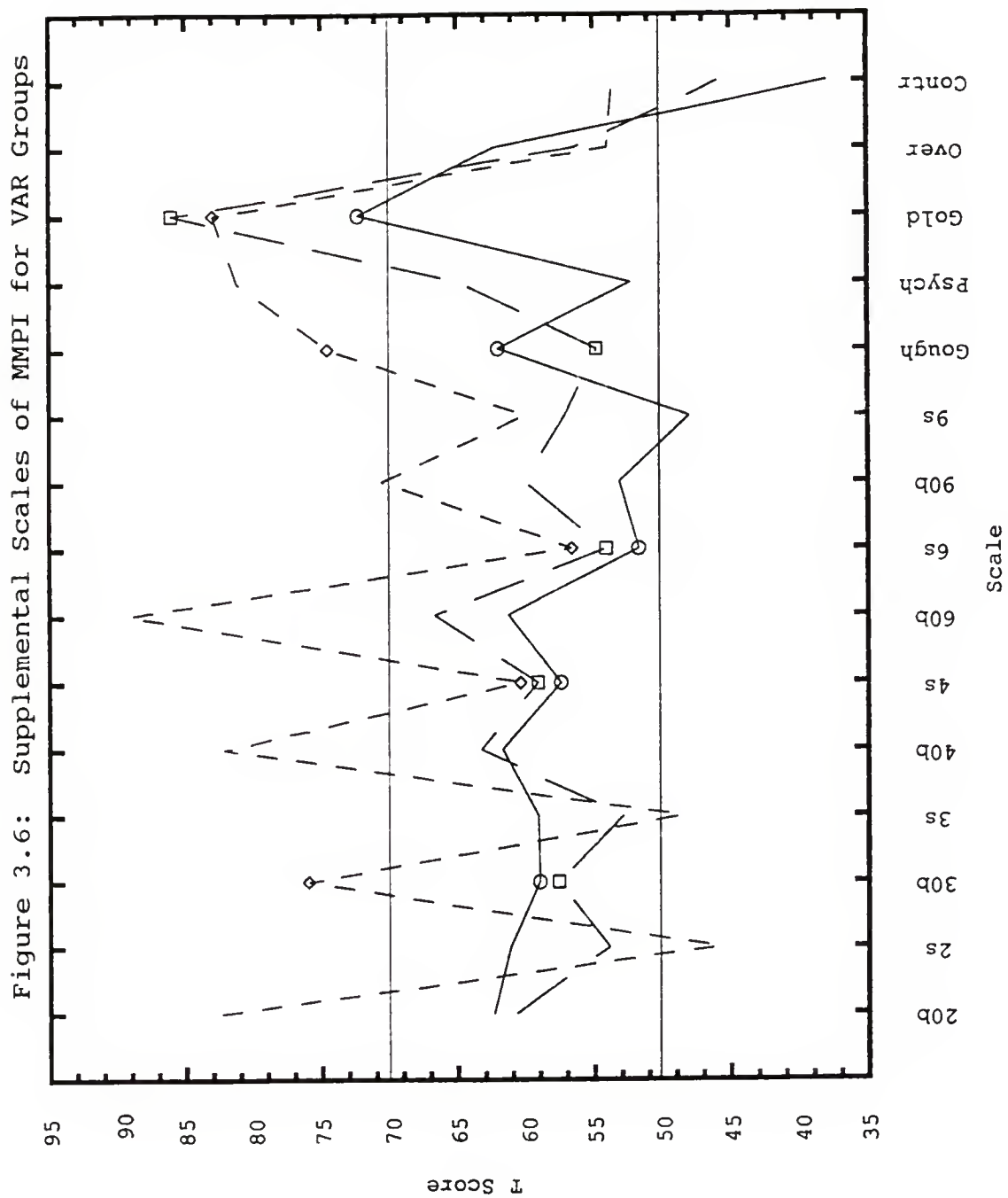


Figure 3.4: Supplemental Scales on MMPI for NDISS Groups







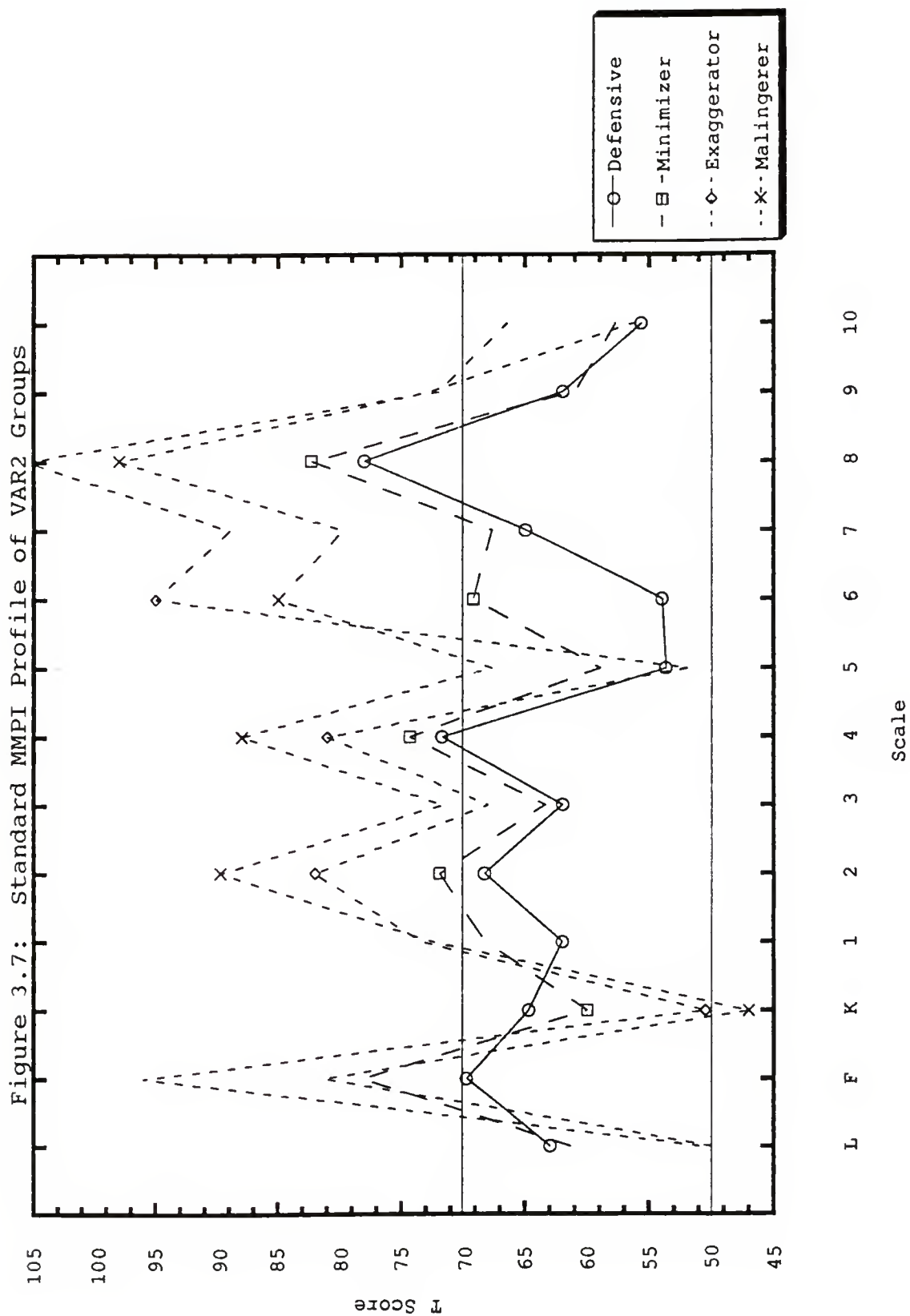
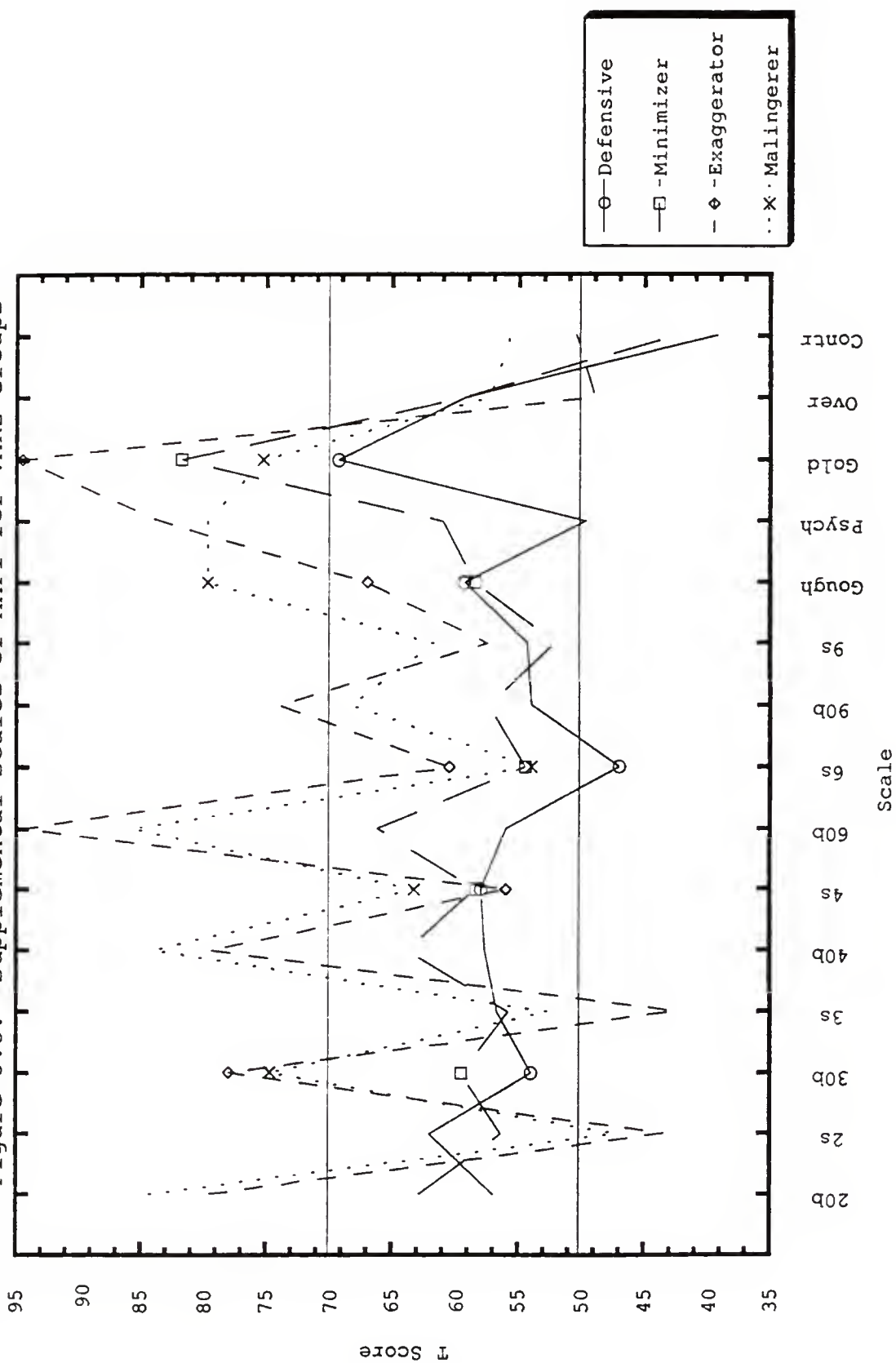


Figure 3.8: Supplemental Scales of MMPI for VAR2 Groups



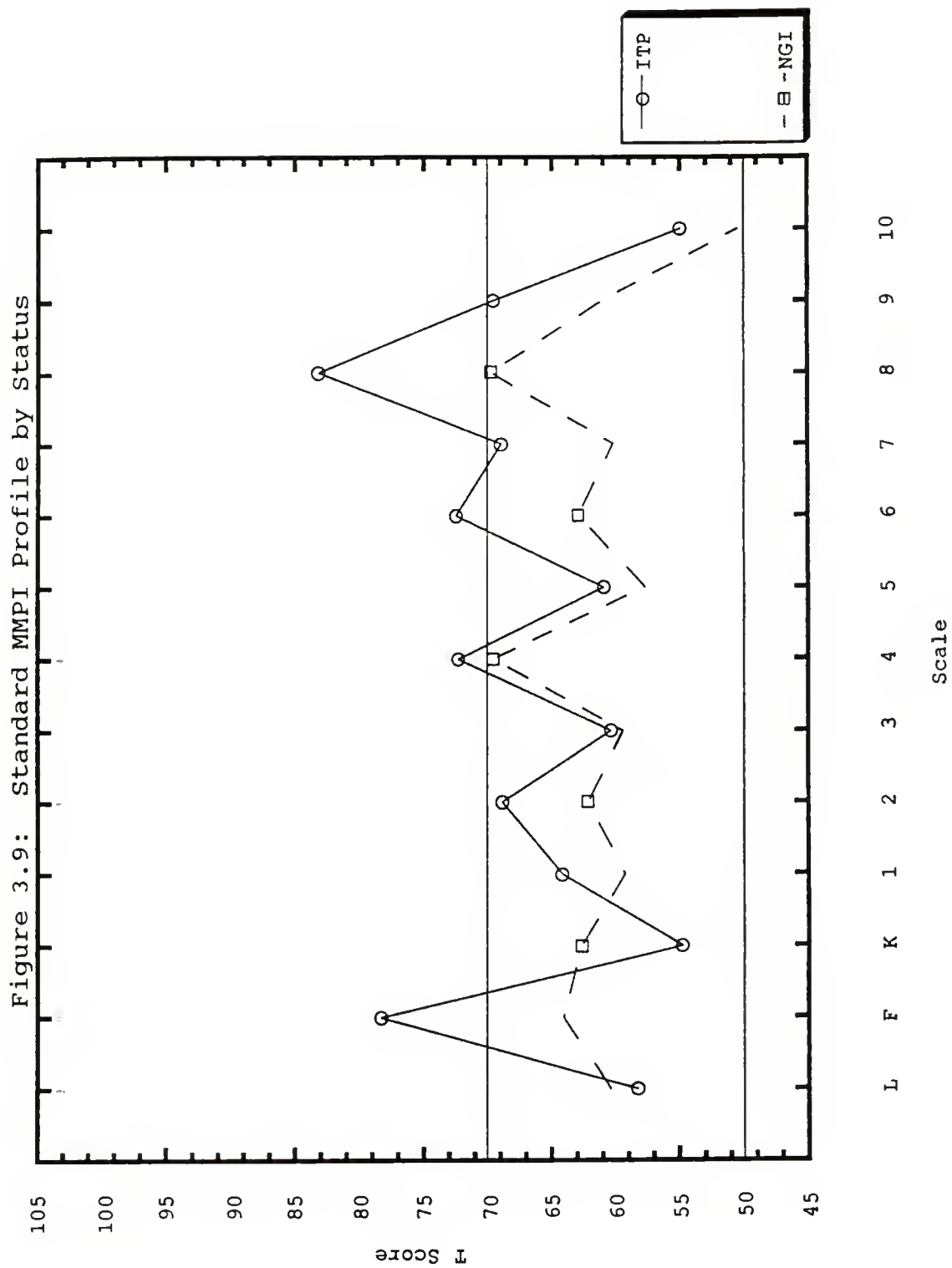


Figure 3.10: Supplemental Scales of MMPI for Status

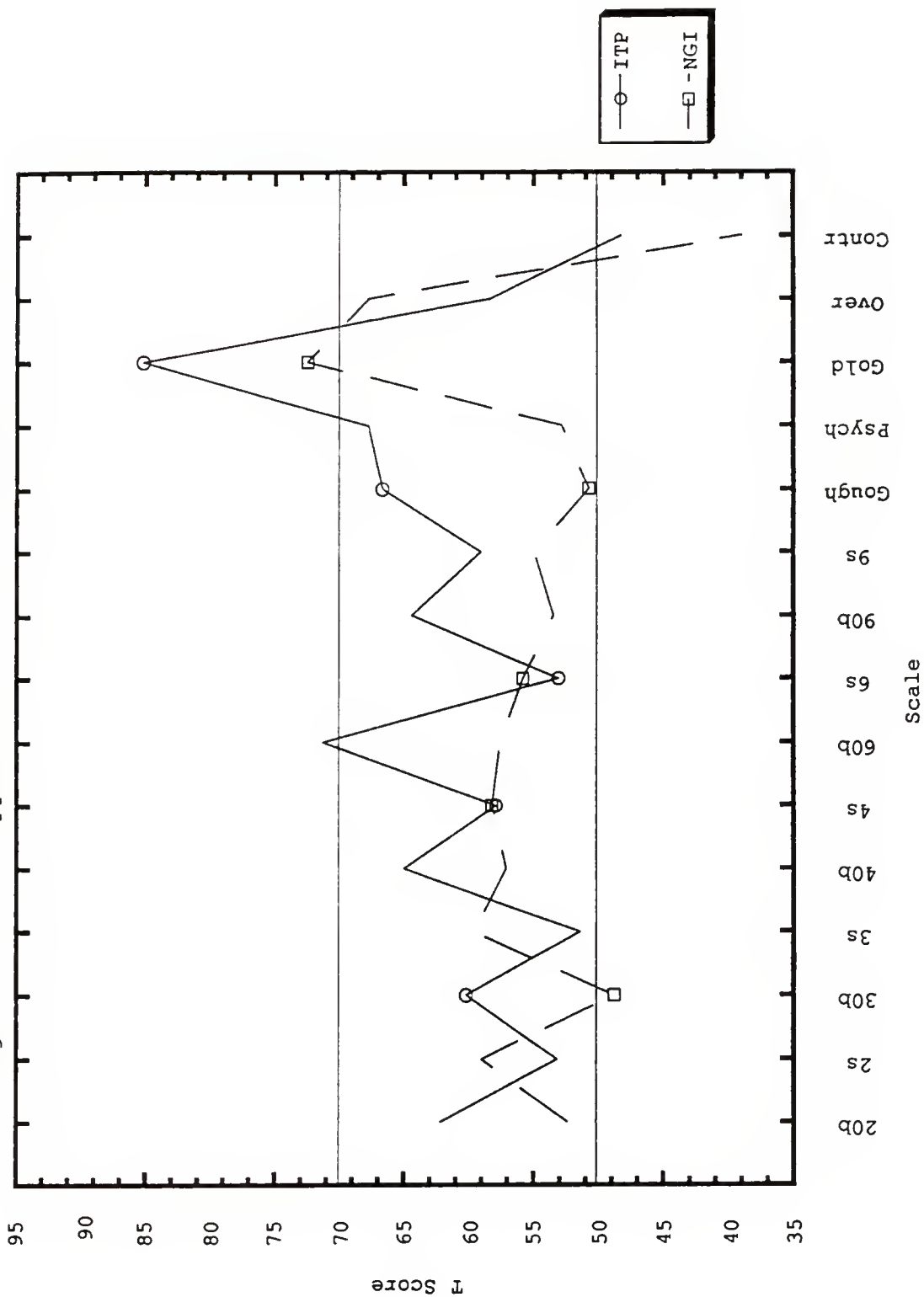


Figure 3.11: Standard MMPI Profile by Felony Code

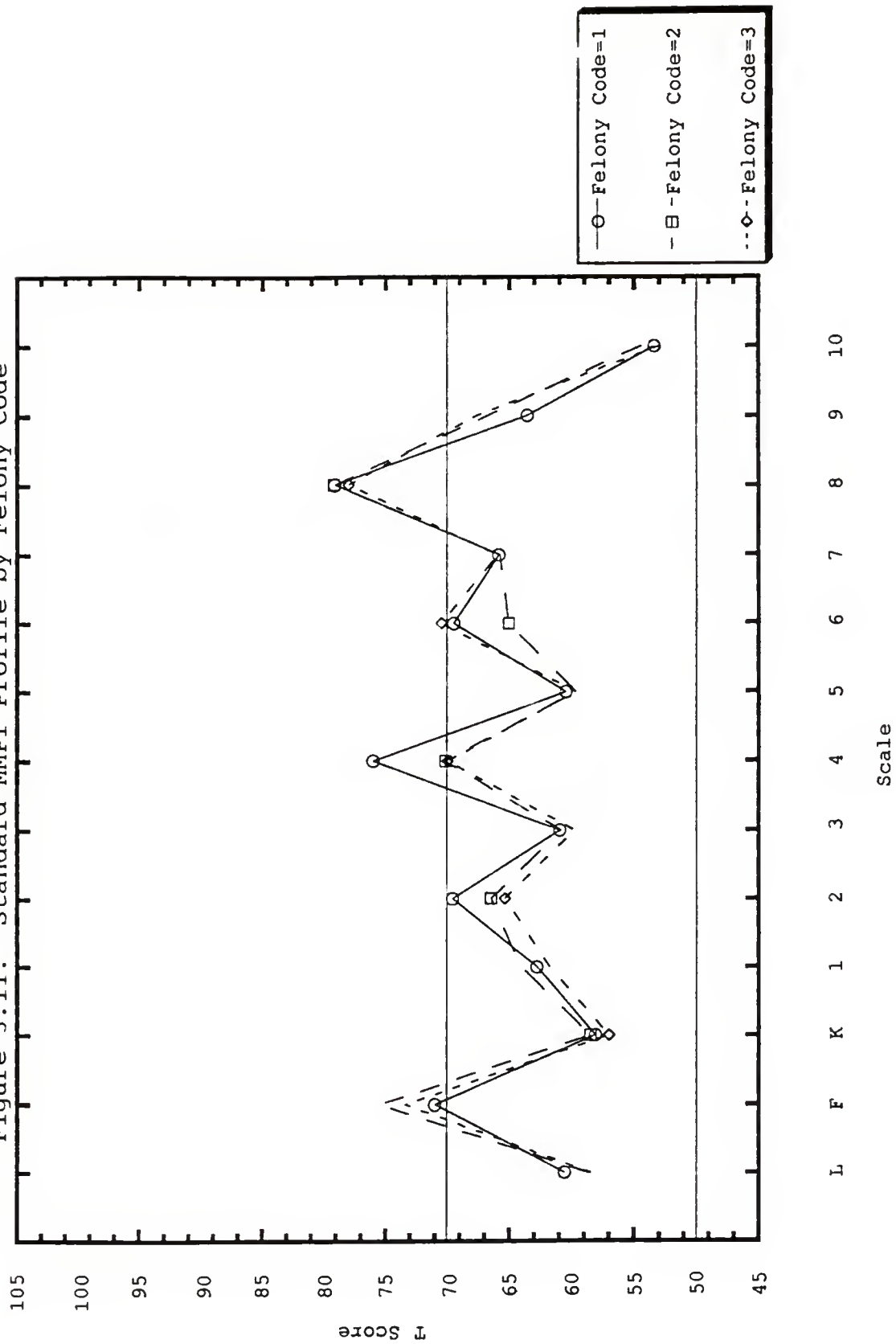
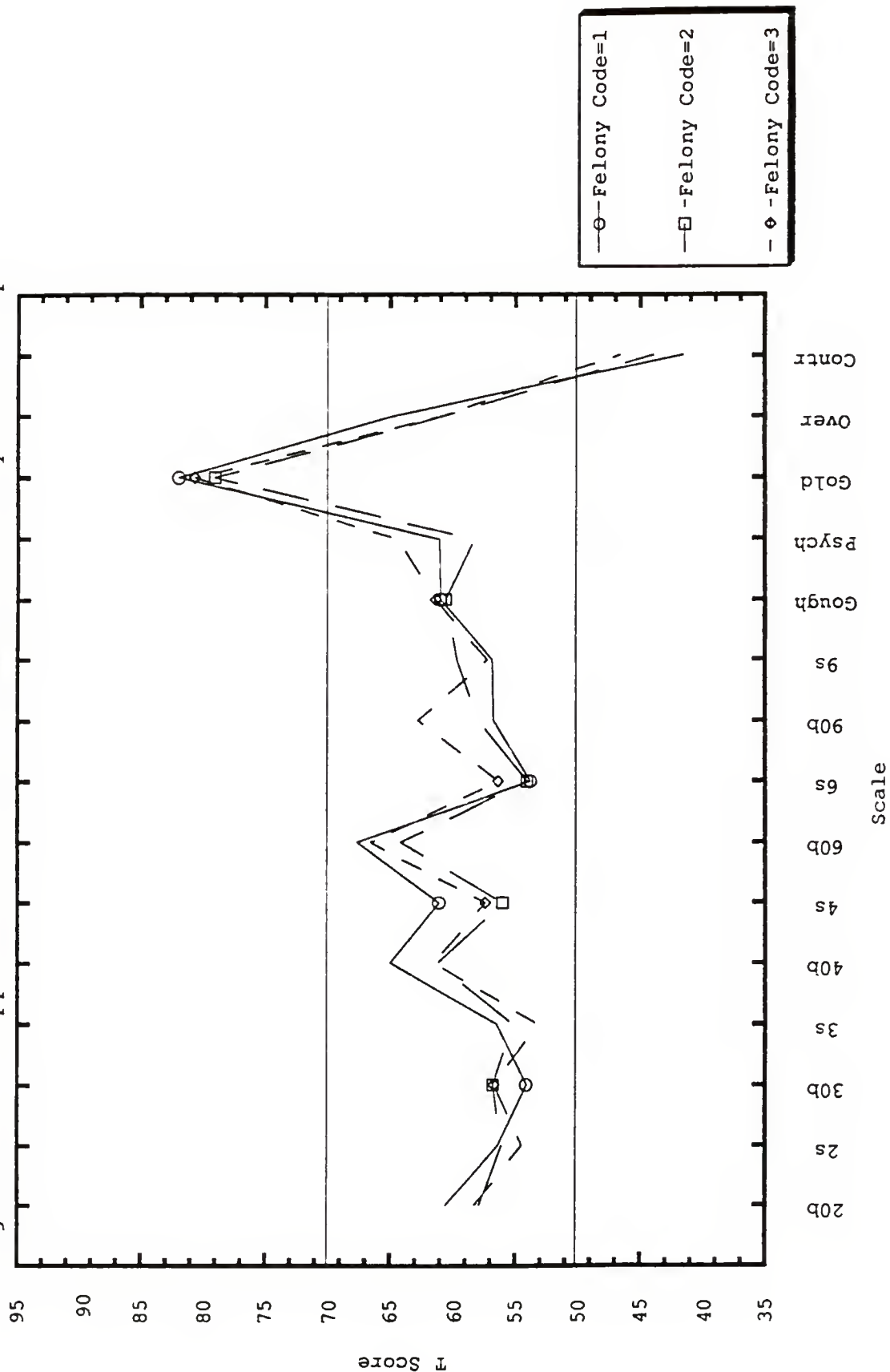


Figure 3.12: Supplemental Scales of MMPI for Felony Code Groups



The individual MMPI scales were checked for normality. The skewness, kurtosis, box plots, normal probability plots and tree diagrams were evaluated. The following variables were not normally distributed: raw 1, raw 7, raw 8, total obvious and six-obvious. These were transformed to normality using the log transformation. Upon transformation these variables were normally distributed. The careless and cannot say scales were not transformable to normality. As mentioned, these variables were transformed into categorical variables and analyzed separately.

The variable NDISS (those seen as exaggerating, accurate or minimizing based on the DISS variable) was analyzed with the MMPI variables using a multivariate analysis of variance (MANOVA). The overall MANOVA statistics were not significant. Wilk's Lambda had an F-value of 1.17 and a P-value of .29. Pillai's Trace had an F-value of 1.20 and an P-value of .26. Univariate analysis suggest that 12 of the MMPI variables were significantly different as a result of group membership. These are listed in Table 3-6. Analysis of the Tukey statistics suggests that the differences tended to be a separation of the exaggerators from the other two groups with the exaggerators scoring higher on these scales indicating greater pathology. The Chi-square analysis comparing NDISS x cannot was significant ($p = .023$) with

**Table 3-6: MMPI Variables Significantly Different
on the NDISS Variable**

Variable	F-Value	P-Value
T2	6.59	.0027
T3	3.87	.0269
Raw 4	5.48	.0068
T4	4.57	.0146
T6	3.63	.0331
T7	4.79	.0122
T0	3.23	.0471
Total 0B	4.41	.0168
20B	9.17	.0004
30B	4.99	.0102
40B	4.65	.0137
60B	3.86	.0267

the exaggerators tending to be high. The Chi-square analysis comparing careless and NDISS was not significant.

The variable VAR (the added variable of CON considered for the psychologists and therapists) was analyzed with the MMPI variables using a MANOVA. The overall MANOVA statistics were not significant. Wilke's Lambda had a P-value of 1.36 and an F-value of .10. Pillai's Trace had an F-value of 1.41 and a P-value of .07. Univariate analysis suggest that 10 of the MMPI variables were significantly different as a result of group membership. These are listed in Table 3-7. Only the nine subtle variable is different from those observed in the univariate NDISS analysis. The further subgroupings created an even smaller number of members per group. Analysis of the Tukey statistics suggests that the differences tended to be a separation of the malingerers from the other groups (note that malingerers and exaggerators are synonymous for this variable) with the malingerers endorsing items indicative of greater pathology. The Chi-square analysis comparing var with careless and cannot were both insignificant.

The variable VAR2 (the added variable of CON considered for the psychiatrists) was analyzed with the MMPI variables using a MANOVA. The overall MANOVA statistics were not significant. Wilke's Lambda had an F-value of 1.26 and P-value of .1393. Pillai's Trace had an F-value of 1.32 and a P-value of .0843. Univariate

Table 3-7: MMPI Variables Significantly Different
on the VAR Variable

Variable	F-Value	P-Value
T2	4.36	.0081
T3	2.92	.0426
Raw 4	3.58	.0196
T4	3.04	.0369
T7	3.14	.0330
Total 0B	2.89	.0439
20B	6.14	.0012
30B	3.30	.0273
40B	3.06	.0360
9S	3.38	.0248

analysis suggest that five of the MMPI variables were significantly different as a result of group membership. These are listed in Table 3-8. These five variables were also found to be different in the analysis of NDISS and VAR. As with the VAR analysis the further subgroupings resulted in even smaller numbers per group. Analysis of the Tukey statistics suggested that the differences found were between the malingering group and the accurates with the malingerers endorsing items indicative of greater pathology. The Chi-square analysis comparing VAR2 with careless and cannot were both insignificant.

The variable VAR differentiated five more MMPI variables based on group membership than did VAR2. Individual T-tests were run comparing VAR and VAR2 on the MMPI variables. There were no significant differences. This is in part due to the small sample sizes. However, this does suggest that the VAR2 measure does not add any additional variance and does not need to be considered in lieu of the average of the therapists and psychologists since fewer differences were found on the MMPI variables and group membership.

Overall, adding the CON dimension did not produce greater differentiation between the groups. More differences were found on the analysis of NDISS than the analysis of VAR and VAR2. This is in large part due to the small sample sizes. As such the utility of further

Table 3-8: MMPI Variables Significantly Different
on the VAR2 Variable

Variable	F-Value	P-Value
T2	3.01	.0263
Raw 4	2.87	.0319
T7	2.52	.0510
20B	4.56	.0031
30B	2.50	.0537

analysis of the CON variable is dubious and was not undertaken. It is important to note that with the exception of one scale (nine subtle) all the observed differences on the MMPI variables when analyzing the CON variable were found when only considering the resident's DISS score. The psychiatrists' ratings of CON accounted for the least amount of variability on the MMPI. Further the NDISS groupings are the most powerful as they include the ratings of all three professional groups.

The variable of status was analyzed with the MMPI variables using a MANOVA. The overall MANOVA statistics were not significant. Wilke's Lambda had a F-value of .80 and a P-value of .73. Pillai's Trace had an F-value of .80 and a P-value of .73. Univariate analysis suggested that 25 of the MMPI variables were significantly different as a result of the resident's legal status. These are listed in Table 3-9. It should be noted that there are only two groups in the status variable (NGI and ITP) and therefore there was a relatively large n for each group. Analysis of the Tukey statistics suggested that the residents who were ITP tended to score higher on the MMPI scales indicative of pathology or exaggeration of symptoms. The ITP persons scored lower on measures of defensiveness (the Overcontrol Scale and the K scales). The Chi-square analyses comparing status with careless and cannot were both insignificant.

**Table 3-9: MMPI Variables Significantly Different
by Status**

Variable	F-Value	P-Value
TF	10.22	.0023
TK	11.01	.0016
Raw 1	9.85	.0027
Raw 4	4.39	.0408
T6	6.17	.0160
Raw 7	12.07	.0010
T7	8.17	.0060
Raw 8	11.12	.0015
T8	9.30	.0035
Raw 9	9.09	.0039
T9	7.34	.0090
T0	6.17	.0161
Total 0B	11.60	.0012
20B	9.24	.0036
2S	4.02	.0500
30B	10.50	.0020
40B	5.07	.0284
60B	11.26	.0014
90B	8.01	.0065
Gough	12.49	.0008
Psych	11.67	.0012
Goldberg	5.23	.0269
Overcon	16.49	.0002
Control	9.60	.0031

Since all of the persons seen as exaggerating were ITP and the greatest number of univariate MMPI differences were found comparing status levels, a second MANOVA was run on the status variables excluding those persons seen as exaggerating. The overall MANOVA statistics were not significant. Wilke's Lambda had a F-value of 1.15 and a P-value of .3938. Pillai's Trace had an F-value of 1.15 and a P-value of .3938. Univariate analysis suggested that 22 of the MMPI variables were significantly different as a result of the resident's legal status despite eliminating those seen as exaggerating. These are listed in Table 3-10. As with the previous status analysis, the Tukey statistics suggested that those who were ITP tended to endorse items indicative of pathology and when compared to the NGI group. The ITP group also tended to endorse fewer items than the NGI group on scales measuring defensiveness. The Chi-square analyses comparing status with careless and cannot were insignificant.

Since there were significant status effects on the MMPI, an additional MANOVA was run comparing only the ITP group subdivided into two groups; those found exaggerating and the rest of the sample. The overall MANOVA statistics were not significant. Wilke's Lambda had a F-value of .05 and a P-value of .1053. Pillai's Trace had an F-value of .99 and a P-value of .1053. Univariate analysis suggested that 10 of the MMPI variables were significantly different

**Table 3-10: MMPI Variables Significantly Different
by Status Excluding Exaggerators**

Variable	F-Value	P-Value
TF	8.36	.0057
TK	8.50	.0053
Raw 1	7.51	.0085
T6	3.94	.0527
Raw 7	8.67	.0049
T7	5.44	.0237
Raw 8	8.19	.0061
T8	6.83	.0118
Raw 9	7.37	.0091
T9	6.06	.0173
T0	4.75	.0340
Total 0B	8.51	.0053
20B	6.93	.0112
30B	8.42	.0055
3Sub	7.66	.0079
60B	7.86	.0072
90B	6.71	.0125
Gough	9.93	.0028
Psycho	9.24	.0038
Goldberg	4.93	.0310
Overcon	15.10	.0003
Control	8.51	.0053

as a result of exaggeration within the ITP population. These are listed in Table 3-11. The group who was considered to be exaggerating pathology had higher MMPI scores on all 10 of the variables found to be significantly different.

The variable of fcode was analyzed with the MMPI variables using a MANOVA. The overall MANOVA statistics were insignificant and none of the MMPI variables were significantly different as a result of fcode. The Chi-square analysis comparing fcode and careless and cannot were both insignificant.

Regression Analysis

Multiple regression analyses were run to determine a prediction equation for the dependent variable DISS and the independent variables of the MMPI and demographic data. Models were run using both forward/backward and step-wise selection methods. The models which only included those variables found significantly different on the DISS variable produced the best results; however, the best model found explained only 26% of the total variance, significant at the .036 level. The variables used for this model were T2, T3, Raw 4, T4, T6, T0 and Three OB. The single variable that explained the most variance Two OB, was excluded from the complete model. The collinearity of the 12 MMPI variables that were found significantly different

Table 3-11: MMPI Variables Significantly Different in ITP Group Comparing Exaggerators and the Rest of the Sample

Variable	F-Value	P-Value
T2	7.38	.0102
T3	3.95	.0546
Raw 4	7.16	.0113
T4	5.88	.0206
T7	5.40	.0260
Total 0B	5.12	.0300
20B	10.67	.0024
30B	5.21	.0287
40B	6.30	.0169
N 60B	4.15	.0493

in regard to DISS was assessed. Eight of the 12 variables had tolerance factors of less than .10. As such multi-collinearity is likely to be a problem and would help account for the relatively small amount of total variance explained by the model.

Given that all the Tukey differences found on the MMPI variables when compared with DISS were between the exaggerators and the other two groups, a multiple regression was run using the dependent variable of DISS in which only exaggerators and others (accurates and minimizers averaged together) were considered. This did not improve the prediction equation as still only 26% of the variance was explained. The prediction equation was used to predict DISS and only one of the exaggerators was accurately classified. The equation tended to classify persons into the accurate group which is overweighted in the sample and a high percentage of correct responses would be gathered simply by predicting everyone as accurate. As such, the prediction equation did not aid in providing additional information for classification.

A principal components analysis was run to help elucidate the small amount of variance explained by the regression model. The first principal component explained 64% of the variance. The first five principal components explained 95% of the variance. The first principal component does not have any loadings greater than .45 but

has six variables with loadings greater than .30 (T2, T6, T7, Two OB, Three OB and Four OB). The second component is primarily a positive loading on T2 and a negative loading on T6. The third component is primarily related to T4. The fourth component is primarily related to T3. The fifth component was primarily related to T7 and negatively related to Three OB.

CHAPTER 4 DISCUSSION

Professional Agreement

All three groups of professionals who took part in this study (psychologists, therapists and psychiatrists) had exceptionally high response rates. As such, it is fair to state that the responses received were fully representative of the NFETC admissions during the course of the study and not reflective of a response bias.

There was agreement among the professionals in terms of the dissimulation scale. This would suggest that the professionals are similar in their attributions of behavior in terms of whether they view the resident as exaggerating or minimizing his pathology. Further, given this agreement among the raters the overall rating of dissimulation is a powerful measure as it is the mean of the three different raters.

However, the raters disagreed as to the conscious intent of the dissimulation. The psychiatrists tended to see behavior as less consciously motivated than did the therapists and psychologists. This is likely to be the result of the different training that psychiatrists receive as compared to other human services professionals. Psychiatrists are physicians and are indoctrinated into the

medical model. As such, it is likely that they view presentations in terms of disease processes and classic psychoanalytic thought which focuses heavily on the working of the unconscious. This did not produce a differential effect in the psychiatrist's judgment of the resident's behavior, but rather the attribution of the behavior. Given the disagreement among professionals, the added dimension of consciousness is not as powerful a measure. As will be further elucidated the consciousness dimension did not contribute significantly to the differentiation of groups based on the MMPI.

Base rates of Dissimulation

Only 10% of the persons included in all the analyses were considered to be exaggerating their level of pathology. Further this figure is inflated as many of those considered to be accurate were excluded because they did not receive CON ratings. These figures are lower than the suspected rates of malingering in forensic populations discussed in the introduction. There are two likely explanations for these results. The most obvious is simply that the incidence of malingering has been over-estimated. To support this assertion a larger sample of persons in a variety of different forensic settings must be assessed. The second is that the community evaluators are effectively recognizing many of those persons who are considered to be

malingering and are not recommending that they require mental health hospitalization. To support this assertion it would be necessary to assess potential forensic patients as they are seen by the community evaluators and then compare the rates of malingering at that stage with those who make it to forensic settings.

Interestingly, when looking at the consciousness scale all nine of the exaggerators were seen as malingerers by the psychologists and therapists and six were seen as malingerers by the psychiatrists. It would appear that in order to assess malingering one needs only to look at the dimension of exaggeration and not intent of the exaggeration. This is important as this is a lower order inference and, therefore, likely to be more accurate. Further, all three professionals agreed on their assessment of dissimulation and, therefore, it is a powerful rating.

A larger percentage of the population was assessed as minimizing pathology (29%). This is also an overestimation as the accurates without CON scores were excluded. Although base rate estimates do not exist for the population of those seen as minimizing in forensic settings, it would appear that it is a significant portion of the population and clearly more prevalent than the incidence of exaggeration. In contrast to the exaggerators when considering the conscious intent factor, minimization is seen more often as an unconscious factor and not an attempt

to maximize their legal situation. However, as with the exaggerators, the psychiatrists tend to infer less conscious intent than do the therapists and psychologists.

Group Differences

It was hypothesized that more of the exaggerators would be ITP as opposed to NGI. The Chi-square analysis did not bear this out; however, all nine of the exaggerators were ITP. This was not statistically significant in large part due to the small sample size. A trend is apparent in which the exaggerators do seem to fall into the ITP category. Further research with a larger sample size should help to support this statistically. Given the low incidence of exaggerating it would appear to be a mistake to infer dissimulation based on group membership and this calls into question the validity of research which has made such assumptions.

Rogers (1988) suggested that malingerers would be more likely to be uncooperative with the assessment process and reject testing. This was not supported in this research as there were no differences between groups in terms of completing the MMPI. This is not a surprising finding for a forensic population as malingering in such a setting is usually an act of commission rather than omission. As such dissimulation in this population involves outright activity (catatonic states are not common among forensic populations

as it is difficult to engage in illegal activity in such a state). Further, persons in forensic settings are more likely to be action oriented in general and therefore willing to engage in an evaluation.

Severity of crime was not related to dissimulation. This would suggest that one cannot infer motivation based solely on potential penalties. It is important to note that this finding might not generalize to persons prior to admission in a forensic setting. As mentioned the community evaluators might be filtering out those persons in legal troubles who are attempting to dissimulate. Further it is possible that community evaluators apply stricter standards to those accused of committing severe crimes and are less likely to allow them to enter the forensic as apposed to the corrections system.

Overall, more research is needed before definitive statements can be made concerning dissimulation and legal status and severity of crime. This should be completed on two fronts including the frontline evaluators who do the screening prior to admission into the forensic system.

MMPI Differences

Tables 3-3 and 3-4 presented the superimposed MMPI profiles of those defined as minimizing, accurate and exaggerating on the NDISS variable. The univariate statistics from the MANOVA found 12 significant differences

when comparing the three groups. None of these differences were found on the traditional validity scales (L,F and K). However, when viewing Table 3-3, the clinician can recognize clinically significant differences which do suggest that the validity scales are valuable in assessing dissimulation. The significant differences found statistically were on scales 2,3,4,6,7, and 0. This is best interpreted as suggesting that those seen as dissimulating are doing so by endorsing a wide variety of items symptomatic of depression, hysteria, psychopathy, paranoia and anxiety. This is further supported by the significant differences found when looking at the obvious-subtle scales in which those seen as exaggerating are over-endorsing the obvious items indicative of depression, hysteria, psychopathy, and paranoia. The Tukey analysis suggest that the differences observed are due to the exaggerating group differing from the accurates and minimizers. Statistically the accurates and minimizers do not differentiate themselves on the MMPI.

There were no significant differences on the validity scales; however, clinically significant differences were readily apparent. The group of exaggerators had an average F scale T-score of 87 compared with the accurates who had a score of 71 and the minimizers who had a score of 76. All three groups have high F-scores. This is likely due to the high baserate of pathology in this population as well as

the unusual experiences of the small percentage of the general population that has contact with forensic centers. Despite the overall high F-scores the exaggerator group's F-score of 87 would suggest malingering (Graham, 1988), while the other groups would be more suggestive of psychological distress (Greene, 1980).

The K scale also reflects clinically significant differences. The group of exaggerators had an average K-scale T-score of 48 compared with the accurates who had a score of 58 and the minimizers who had a score of 61. This would suggest that the exaggerators are responding in a manner suggestive of little psychological defensiveness. Further, when comparing the raw F-K index the exaggerators have a score of +9 while the minimizers and accurates both have a score of -3. Overall, this would suggest that the F, K, and F-K scales are useful in the detection of the exaggeration of pathology. However, the traditional validity scales do not seem to be as useful in the detection of defensive responding.

The clinical scales of 1,5,8,and 9 were not statistically different when comparing the three ndiss groups. However, as with the validity scales, clinically significant differences are apparent for scale 8. Given the high rate of base pathology and level of social alienation in this population, the elevation of scale 8 by all three groups is to be expected. The exaggerator group

had a scale 8 T-score of 98 while the accurates had a T-score of 75 and the minimizers had a T-score of 81. The scores of 75 and 81 are suggestive of pathology while the very high elevation of 98 is suggestive of possible dissimulation (Greene, 1980).

In general, when evaluating the traditional MMPI profile, the exaggerating group tends to have higher elevations on scales indicative of pathology. Further, the exaggerators' profiles assume the saw-toothed appearance expected of dissimulation (Graham, 1988). In addition to the usefulness of the F and K scales to detect exaggeration of pathology, it appears that significant elevations on several of the clinical scales (in particular 2,4,6 and 8) are indicative of dissimulation. The detection of the minimizing of pathology in forensic settings does not appear possible with the MMPI. This is likely due to the high base rate of pathology in this overall population. As such, relatively high MMPI scores are likely even in those minimizing pathology.

Based on the a priori information concerning the MMPI validity scales one can support the accuracy of the ratings concerning those classified as exaggerating pathology. Gross elevations on several scales appear to be the best way to determine exaggeration of symptomatology on the basic MMPI profile. It would appear that T-scores in the range of 70-80 are not useful in differentiating pathology

in this population. This is likely due to the overall level of psychopathology in this population.

The supplemental scales analyzed in this study only reflected statistical differences on the obvious scales. However, the obvious differences are quite large and are readily apparent when seen in a profile fashion. They along with the other supplemental scales were superimposed in Figure 3-3. There is a definite saw-toothed appearance to the obvious-subtle portion of the figure for the exaggerator group and not for the accurates or minimizers. There are not significant differences on the subtle scales and the validity of using those scales to assess dissimulation is not supported. Based on this study it would appear that the Weiner-Harmon obvious items are of significant value in the detection of the exaggeration of symptomatology. Although the subtle items appear to have little value, a plot of the obvious and subtle items might have a heuristic value. As can be seen in examining Figure 3-4 the stark contrast between the obvious and subtle items is very noticeable for the exaggerator group and not for the other groups. Viewing such a disparity on these scales might quickly alert the clinician to the possibility of dissimulation.

Two other supplemental scales appear to be clinically useful in the differentiation of the exaggeration of pathology. On the Psychotocism scale the exaggerators

received a T-score of 82 while the minimizers received a T-score of 59 and the accurates received a T-score of 62. This would suggest that exaggerators readily endorse items highly indicative of gross psychotic pathology in comparison with the other groups. On the revised Gough dissimulation index the exaggerators received a T-score of 75 while the accurates received a T-score of 60 and the minimizers a T-score of 59. This scale was developed to detect malingering and would appear to be effective in doing so. The relatively less significant magnitude of the Gough T-score for the exaggerator group in comparison with the other T-score elevations in this group is likely due to the type of pathology dissimulated by forensic groups versus that of the population used in devising the Gough index. Forensic populations are more likely to dissimulate psychotic spectrum disorders and this is demonstrated in this study via gross elevations for the exaggerator group on the following scales: F, 2, 4, 6, 8, and Psychotocism. The other supplemental scales collected did not appear to help in the detection of malingering or defensiveness.

The addition of the conscious intent factor did not produce additional scale differences on the MMPI. This measure also introduced greater measure variance. Therefore, a discussion of the VAR and VAR2 differences on the MMPI will not be broached. It is important to note that in the assessment of malingering one might be better

served to simply assess the phenomena of exaggeration of pathology and not be concerned with intent. This is a lower order inference which can be assessed with greater reliability. As far as the minimization of pathology is concerned, the conscious intent dimension did not help to differentiate those seen as minimizing. As mentioned, in this population the MMPI is likely not to be the best tool to assess minimization as judged by the raters in this study.

There are two likely explanations for the above statement. The first and most obvious is that the MMPI is simply not an appropriate measure to assess defensiveness in a forensic population. The second involves the attitudes of the raters. A larger portion of the population in this study were seen as minimizing pathology as opposed to exaggerating pathology. It is possible that the rater applied stricter standards for classifying someone as exaggerating than minimizing. This would result in the exaggerating group being more "highly exaggerating" than the minimizing group. If this were the case, the difference between the accurates as minimizers would be closer than the accurates and exaggerators. A separate assessment into the attitudes of mental health professionals in the assessment of dissimulation might help to clarify this. There is a significant literature on

defense mechanisms which might sensitize clinicians to the phenomena of defensiveness thus explaining the above.

There were many significant differences on the MMPI when comparing the profiles of the ITP and NGI groups. As mentioned, this is in part due to the large numbers in both groups and that there are only two groups to compare. The basic MMPI profiles of the two groups were superimposed in Figure 3-9. Despite the statistical significances the clinical significances are less than in comparing the ndiss groups. In general the ITP group is displaying more psychopathology and unusual experiences than the NGI group. This is supported by higher scores on scales F, 6, 7, 8 and 9. The ITP groups received lower K-scale scores which suggest that they are less defensive or have fewer psychological resources.

The supplemental MMPI profiles of the two groups were presented in Figure 3-10. The obvious scales are higher for the ITP group. This also suggests that they are endorsing more psychopathology. The subtle scales for 2 and 3 are also significantly different with the NGI group having higher subtle scores. This is the only evidence found in this study to suggest that the subtle scales might be of diagnostic value. However, the differences are not observed for the subtle scales on 4, 6, and 9 or a summation of all the subtle scales. Significant differences on the Goldberg Index and Psychoticism Scale also suggest the

admission of greater pathology in the ITP group. The ITP group scored higher than the NGI group on the revised Gough scale suggesting a greater tendency to malingering in that group. However, the average Gough scores for the ITP group were still below 70 and therefore not strongly suggestive of one attempting to malingering. This study would suggest that ITP persons have greater pathology as measured by the MMPI than NGI persons. However, this cannot be firmly attributed to dissimulation.

Since all of the persons considered to be exaggerating pathology were in the ITP group, an additional analysis comparing the ITP and NGI groups was run excluding the subset of ITP persons who were classified as exaggerators. This had the effect of reducing the size of all of the significant differences; however, 22 of the 25 scales found different on the complete status analysis were found on this additional analysis. This would suggest that the above differences are not a result of the intention to dissimulate. Rather, it would appear that the ITP population is significantly different than the NGI population in terms of psychopathology. The MMPI profiles for the ITP population are suggestive of significantly more pathology than the NGI population. In particular the ITP population is likely to be more psychotic, active, paranoid and alienated. They are also likely to be less defensive and more readily admitting to unusual experiences.

Finally, analysis of the ITP group in which the exaggerators and others were compared yielded similar results as the general ndiss analysis. The exaggerators had higher MMPI scores on scales measuring general pathology (2,3,4,7) and on the obvious scales. These results lend further support to the notion that dissimulation can be assessed in forensic populations by the general elevation of a variety of indices of psychopathology.

Analysis of the K-correction suggested that significant differences on the scales with K-correction were also found when analyzed without K-correction. As such, it is prudent with forensic populations to follow the accepted format in using the MMPI. Therefore the K-correction is warranted with this population.

Prediction Equations

The prediction equations garnered from this research failed to be of clinical use. There is a problem with multi-collinearity in which several of the MMPI scales are measuring the same construct. Therefore, even though the ndiss analysis had 12 different MMPI scales reflecting significantly different values, this is not reflecting 12 independent constructs. This is not surprising given the finding that general elevation of a wide variety of psychopathology appears to be the best discriminator of

dissimulation on the MMPI. Principal components analysis supports this as the primary component which accounts for 68% of the variance is probably best interpreted as a general measure of psychopathology.

MMPI-2: Applications of This Research

The MMPI-2 was released shortly after the completion of the data collection portion of this study. The MMPI-2 is a revision of the MMPI. There are several new content and research scales on the MMPI-2 (Butcher et al. 1989). However, little has been changed in regard to the standard validity and clinical scales. The largest changes were on the F scale where four items were deleted. The most significant changes in terms of the traditional validity and clinical scales concern the normative sample. The MMPI had a limited normative sample and the MMPI-2 has a normative sample based on the 1980 census. The sample for the MMPI-2 is more educated than the MMPI sample (Butcher et al. 1989). As such, the findings in this research are relevant and significant to the data base that will be forming concerning the MMPI-2. One cautionary note should be mentioned regarding the higher education level of the MMPI-2 normative group. Given the relatively unique socialization experiences forensic populations have encountered, a higher educated normative sample might not be appropriate. Separate norms for forensic populations

would be a useful endeavor. Clearly, though, research of this type will need to be conducted with the MMPI-2.

In addition to repeating this research with the MMPI-2. Several of the new content scales might be investigated. In particular the following scales appear to have relevance to a forensic population: Depression, Bizarre Mentation, Anger, Cynicism, Antisocial Practices, Social Discomfort, Family Problems and Negative Treatment Indicators.

Conclusions

Five of the seven initial hypothesis concerning the differentiation of the malingering group were supported in this research. The DS-R scale, K scale, Psychoticism scale, and F-K index reflected clinically significant differences in the directions predicted when comparing the exaggerator group with the rest of the population. The Weiner-Harmon obvious items also differentiated populations in the expected direction. As predicted the subtle items proved to be of little value. The Goldberg index and Carelessness index did not differentiate the exaggerator population from the entire sample. Although specific a priori hypothesis were not offered concerning the detection of the exaggeration of pathology and the clinical scales, clinical scales seemed to be the most consistent statistical differentiators in this study. As mentioned

general elevations on a variety of scales above what normally would be expected in a disturbed population (T-scores > 80) appears to be a useful tool in the differentiation of exaggeration of pathology.

The differentiation of defensiveness via the MMPI in this population did not prove to be fruitful. Reasons for this are offered in the body of this section.

The NGI group appeared less pathological according to the MMPI. It is possible that the difference between the two groups in terms of pathology is not due to dissimulation in the ITP group but rather due to treatment effects in the NGI group. This would suggest that forensic facilities are doing positive therapeutic work. While this study cannot clarify this, it does raise the specter of successful treatment in forensic facilities.

Behavioral evidence for malingering appears to involve the exaggeration of symptomatology. The inferred motivation for the dissimulation does not appear necessary to assess malingering. This does not suggest that motivation is not important to the concept of malingering. In fact, it is central to the definition of malingering. Rather the exaggeration of psychiatric disorder in forensic populations (as shown to be psychotic spectrum symptoms) does not appear to represent other dynamic situations other than malingering. This is logical as factitious and somataform disorders which involve expression of symptoms

without underlying causal pathology are not likely to be of benefit in forensic settings.

Several avenues of future research have been discussed in this section. Base rates are a very important concern when considering conducting research. One hundred and fifty persons were included in this research and yet only five completed MMPI profiles were available for those considered to be exaggerating pathology. A very large sample should be used in order to avoid the problem of small sample size in the relatively rarefied group of persons seen as dissimulating pathology.

APPENDIX

Accompanying the rating scales were the following instructions:

Please rate the following resident on the attached two scales. This information will aid us in completing a study on the constructs of malingering and defensiveness.

The first scale is a measure of the accuracy of the resident's behavior and self-report in light of your opinion of his level of psychopathology. This is presented on a continuum from minimization to exaggeration. If you believe the resident is accurately reflecting his level of psychopathology place an X in the center of the line. If you believe the resident is grossly exaggerating his level of psychopathology place an X on the extreme right of the scale and if you feel that the resident is grossly minimizing place an X on the extreme left of the scale. Use these three landmarks in order to determine where to place each resident in terms of this scale. This scale makes no assumptions concerning each residents level of psychopathology and one who is exaggerating might be significantly disturbed.

The second scale refers to the conscious intent and instrumental gain of the resident regarding his portrayal of psychopathology rated in the above scale. If you believe that the resident's portrayal (whether it is a minimization or exaggeration) is an intentional dissimulation of his level of psychopathology in order to instrumentally benefit (e.g., legal situation) from such a portrayal place an X on the far right of the scale. If you believe that the resident's portrayal is a result of unconscious factors or not related to instrumental gain, place an X on the far left of the scale. For example, a resident who believes that he is talking to

God and that this is status quo may be minimizing his portrayal of psychopathology; however, this would not qualify as a conscious, intentional action for instrumental gain. If you believe that the resident is accurately portraying his level of psychopathology according to the above scale, you do not need to fill out this scale. Use these two landmarks in order to determine where to place the resident in terms of this scale.

Thank-you for your cooperation on this project. Information concerning your ratings will be kept confidential.

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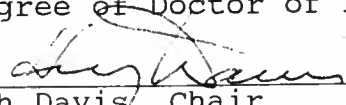
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BIOGRAPHICAL SKETCH

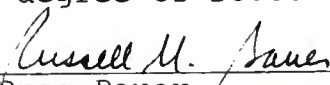
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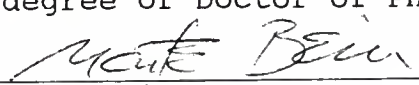
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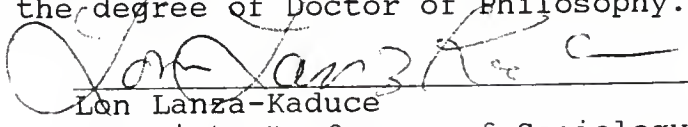
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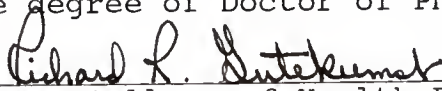
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This dissertation was submitted to the Graduate Faculty of the College of Health Related Professions and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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